

Sequence Listing

<110> Ashkenazi, Avi  
Baker Kevin P.  
Botstein, David  
Desnoyers, Luc  
Eaton, Dan  
Ferrara, Napoleon  
Filvaroff, Ellen  
Fong, Sherman  
Gao, Wei-Qiang  
Gerber, Hanspeter  
Gerritsen, Mary E.  
Goddard, Audrey  
Godowski, Paul J.  
Grimaldi, J. Christopher  
Gurney, Austin L.  
Hillan, Kenneth J.  
Kljavin, Ivar J.  
Kuo, Sophia S.  
Napier, Mary A.  
Pan, James;  
Paoni, Nicholas F.  
Roy, Margaret Ann  
Shelton, David L.  
Stewart, Timothy A.  
Tumas, Daniel  
Williams, P. Mickey  
Wood, William I.

<120> Secreted and Transmembrane Polypeptides and Nucleic  
Acids Encoding the Same

<130> P2630P1C7

<150> 09/918585  
<151> 2001-07-30

<150> 60/062250  
<151> 1997-10-17

<150> 60/064249  
<151> 1997-11-03

<150> 60/065311  
<151> 1997-11-13

<150> 60/066364  
<151> 1997-11-21

<150> 60/077450  
<151> 1998-03-10

<150> 60/077632  
<151> 1998-03-11

<150> 60/077641  
<151> 1998-03-11

JC971 U.S. PTO  
09/978189  
10/15/01

<150> 60/077649  
<151> 1998-03-11  
  
<150> 60/077791  
<151> 1998-03-12  
  
<150> 60/078004  
<151> 1998-03-13  
  
<150> 60/078886  
<151> 1998-03-20  
  
<150> 60/078936  
<151> 1998-03-20  
  
<150> 60/078910  
<151> 1998-03-20  
  
<150> 60/078939  
<151> 1998-03-20  
  
<150> 60/079294  
<151> 1998-03-25  
  
<150> 60/079656  
<151> 1998-03-26  
  
<150> 60/079664  
<151> 1998-03-27  
  
<150> 60/079689  
<151> 1998-03-27  
  
<150> 60/079663  
<151> 1998-03-27  
  
<150> 60/079728  
<151> 1998-03-27  
  
<150> 60/079786  
<151> 1998-03-27  
  
<150> 60/079920  
<151> 1998-03-30  
  
<150> 60/079923  
<151> 1998-03-30  
  
<150> 60/080105  
<151> 1998-03-31  
  
<150> 60/080107  
<151> 1998-03-31  
  
<150> 60/080165  
<151> 1998-03-31  
  
<150> 60/080194

<151> 1998-03-31  
<150> 60/080327  
<151> 1998-04-01  
  
<150> 60/080328  
<151> 1998-04-01  
  
<150> 60/080333  
<151> 1998-04-01  
  
<150> 60/080334  
<151> 1998-04-01  
  
<150> 60/081070  
<151> 1998-04-08  
  
<150> 60/081049  
<151> 1998-04-08  
  
<150> 60/081071  
<151> 1998-04-08  
  
<150> 60/081195  
<151> 1998-04-08  
  
<150> 60/081203  
<151> 1998-04-09  
  
<150> 60/081229  
<151> 1998-04-09  
  
<150> 60/081955  
<151> 1998-04-15  
  
<150> 60/081817  
<151> 1998-04-15  
  
<150> 60/081819  
<151> 1998-04-15  
  
<150> 60/081952  
<151> 1998-04-15  
  
<150> 60/081838  
<151> 1998-04-15  
  
<150> 60/082568  
<151> 1998-04-21  
  
<150> 60/082569  
<151> 1998-04-21  
  
<150> 60/082704  
<151> 1998-04-22  
  
<150> 60/082804  
<151> 1998-04-22

<150> 60/082700  
<151> 1998-04-22

<150> 60/082797  
<151> 1998-04-22

<150> 60/082796  
<151> 1998-04-23

<150> 60/083336  
<151> 1998-04-27

<150> 60/083322  
<151> 1998-04-28

<150> 60/083392  
<151> 1998-04-29

<150> 60/083495  
<151> 1998-04-29

<150> 60/083496  
<151> 1998-04-29

<150> 60/083499  
<151> 1998-04-29

<150> 60/083545  
<151> 1998-04-29

<150> 60/083554  
<151> 1998-04-29

<150> 60/083558  
<151> 1998-04-29

<150> 60/083559  
<151> 1998-04-29

<150> 60/083500  
<151> 1998-04-29

<150> 60/083742  
<151> 1998-04-30

<150> 60/084366  
<151> 1998-05-05

<150> 60/084414  
<151> 1998-05-06

<150> 60/084441  
<151> 1998-05-06

<150> 60/084637  
<151> 1998-05-07

<150> 60/084639



<151> 1998-05-07

<150> 60/084640

<151> 1998-05-07

<150> 60/084598

<151> 1998-05-07

<150> 60/084600

<151> 1998-5-07

<150> 60/084627

<151> 1998-05-07

<150> 60/084643

<151> 1998-05-07

<150> 60/085339

<151> 1998-05-13

<150> 60/085338

<151> 1998-05-13

<150> 60/085323

<151> 1998-05-13

<150> 60/085582

<151> 1998-05-15

<150> 60/085700

<151> 1998-05-15

<150> 60/085689

<151> 1998-05-15

<150> 60/085579

<151> 1998-05-15

<150> 60/085580

<151> 1998-05-15

<150> 60/085573

<151> 1998-05-15

<150> 60/085704

<151> 1998-05-15

<150> 60/085697

<151> 1998-05-15

<150> 60/086023

<151> 1998-05-18

<150> 60/086430

<151> 1998-05-22

<150> 60/086392

<151> 1998-05-22

<150> 60/086486  
<151> 1998-05-22

<150> 60/086414  
<151> 1998-05-22

<150> 60/087208  
<151> 1998-05-28

<150> 60/087106  
<151> 1998-05-28

<150> 60/087098  
<151> 1998-05-28

<150> 60/091010  
<151> 1998-06-26

<150> 60/090863  
<151> 1998-06-26

<150> 60/091359  
<151> 1998-07-01

<150> 60/094651  
<151> 1998-07-30

<150> 60/100038  
<151> 1998-09-11

<150> 60/109304  
<151> 1998-11-20

<150> 60/113296  
<151> 1998-12-22

<150> 60/113621  
<151> 1998-12-23

<150> 60/123957  
<151> 1999-03-12

<150> 60/126773  
<151> 1999-03-29

<150> 60/130232  
<151> 1999-04-21

<150> 60/131022  
<151> 1999-04-26

<150> 60/131445  
<151> 1999-04-28

<150> 60/134287  
<151> 1999-05-14

<150> 60/139557

<151> 1999-06-16  
<150> 60/141037  
<151> 1999-06-23  
  
<150> 60/142680  
<151> 1999-07-07  
  
<150> 60/145698  
<151> 1999-07-26  
  
<150> 60/146222  
<151> 1999-07-28  
  
<150> 60/162506  
<151> 1999-10-29  
  
<150> 09/040220  
<151> 1998- 03-17  
  
<150> 09/105413  
<151> 1998-06-26  
  
<150> 09/168978  
<151> 1998-10-07  
  
<150> 09/184216  
<151> 1998-11-02  
  
<150> 09/187368  
<151> 1998-11-06  
  
<150> 09/202054  
<151> 1998-12-07  
  
<150> 09/218517  
<151> 1998-12-22  
  
<150> 09/254465  
<151> 1999-03-05  
  
<150> 09/265686  
<151> 1999-03-10  
  
<150> 09/267213  
<151> 1999-03-12  
  
<150> 09/284291  
<151> 1999-04-12  
  
<150> 09/311832  
<151> 1999-05-14  
  
<150> 09/380137  
<151> 1999-08-25  
  
<150> 09/380138  
<151> 1999-08-25

<150> 09/380142  
<151> 1999-08-25

<150> 09/709238  
<151> 2000-11-08

<150> 09/723749  
<151> 2000-11-27

<150> 09/747259  
<151> 2000-12-20

<150> 09/816744  
<151> 2001-03-22

<150> 09/816920  
<151> 2001-03-22

<150> 09/854280  
<151> 2001-05-10

<150> 09/854208  
<151> 2001-05-10

<150> 09/872035  
<151> 2001-06-01

<150> 09/874503  
<151> 2001-06-05

<150> 09/882636  
<151> 2001-06-14

<150> 09/886342  
<151> 2001- 06-19

<150> PCT/US98/21141  
<151> 1998-10-07

<150> PCT/US98/24855  
<151> 1998-11-20

<150> PCT/US99/00106  
<151> 1999-01-05

<150> PCT/US99/05028  
<151> 1999-03-08

<150> PCT/US99/05190  
<151> 1999-03-10

<150> PCT/US99/10733  
<151> 1999-05-14

<150> PCT/US99/12252  
<151> 1999-06-02

<150> PCT/US99/28313

<151> 1999-11-30  
<150> PCT/US99/28551  
<151> 1999-12-02  
  
<150> PCT/US99/28565  
<151> 1999-12-02  
  
<150> PCT/US99/30095  
<151> 1999-12-16  
  
<150> PCT/US99/31243  
<151> 1999-12-30  
  
<150> PCT/US99/31274  
<151> 1999-12-30  
  
<150> PCT/US00/00219  
<151> 2000-05-01  
  
<150> PCT/US00/00277  
<151> 2000-01-06  
  
<150> PCT/US00/00376  
<151> 2000-01-06  
  
<150> PCT/US00/03565  
<151> 2000-02-11  
  
<150> PCT/US00/04341  
<151> 2000-02-18  
  
<150> PCT/US00/05841  
<151> 2000-03-02  
  
<150> PCT/US00/07532  
<151> 2000-03-21  
  
<150> PCT/US00/05004  
<151> 2000-02-24  
  
<150> PCT/US00/06319  
<151> 2000-03-10  
  
<150> PCT/US00/08439  
<151> 2000-03-30  
  
<150> PCT/US00/13705  
<151> 2000-05-17  
  
<150> PCT/US00/14042  
<151> 2000-05-22  
  
<150> PCT/US00/14941  
<151> 2000-05-30  
  
<150> PCT/US00/15264  
<151> 2000-06-02

<150> PCT/US00/20710  
<151> 2000-07-28

<150> PCT/US00/23328  
<151> 2000-08-24

<150> PCT/US00/32678  
<151> 2000-12-01

<150> PCT/US00/34956  
<151> 2000-12-20

<150> PCT/US01/06520  
<151> 2001-02-28

<150> PCT/US01/09552  
<151> 2001-03-22

<150> PCT/US01/17092  
<151> 2001-05-25

<150> PCT/US01/17800  
<151> 2001-06-01

<150> PCT/US01/19692  
<151> 2001-06-20

<150> PCT/US01/21066  
<151> 2001-06-29

<150> PCT/US01/21735  
<151> 2001-07-09

<160> 624

<210> 1  
<211> 1743  
<212> DNA  
<213> Homo sapiens

<400> 1  
ccaggtccaa ctgcacctcg gttctatoga ttgaattccc cggggatcct 50  
ctagagatcc ctcgacctcg acccacgagt ccgccaagct ggccctgcac 100  
ggctgcaagg gaggctcctg tggacaggcc aggcaggtgg gcctcaggag 150  
gtgcctccag gcggccagtg ggccctgaggg cccagcaagg gctaggggtcc 200  
atctccagtc ccaggacaca gcagcggcca ccatggccac gcctggggctc 250  
cagcagcatc agcagcccc aggaccgggg gaggcacagg tggccccac 300  
caccggagg agcagctcct gccctgtcc gggggatgac tgattctcct 350  
ccgccaggcc acccagagga gaaggccacc ccgcctggag gcacaggcca 400  
tgaggggctc tcaggaggtg ctgctgatgt ggcttctggt gttggcagt 450

ggcggcacag agcacgccta ccggcccggc cgtaggggtg tgtgctgtcc 500  
 cgggctcacg gggaccctgt ctccgagtcg ttcgtgcagc gtgtgtacca 550  
 gcccttcctc accacctgcg acggggaccg ggcctgcagc acctaccgaa 600  
 ccatttatag gaccgcctac cgccgcagcc ctgggctggc ccctgccagg 650  
 cctcgctacg cgtgctgccc cggctggaag aggaccagcg ggcttcctgg 700  
 ggctgtgga gcagcaatat gccagccgcc atgccggaac ggagggagct 750  
 gtgtccagcc tggccgctgc cgctgccctg caggatggcg gggtgacact 800  
 tgccagtcag atgtggatga atgcagtgt aggagggggcg gctgtcccca 850  
 gcgctgcata aacaccgccc gcagttactg gtgccagtgt tgggaggggc 900  
 acagcctgtc tgcagacggt aactctgtg tgcccaaggg agggccccc 950  
 aggggtggccc ccaaccgcagc aggagtggac agtgcaatga aggaagaagt 1000  
 gcagaggctg cagtccaggg tggacctgt ggaggagaag ctgcagctgg 1050  
 tgctggcccc actgcacagc ctggcctcgc aggcactgga gcatgggctc 1100  
 ccggaccccg gcagcctcct ggtgcactcc ttccagcagc tcggccgcat 1150  
 cgactccctg agcgagcaga ttctcttctt ggaggagcag ctggggctct 1200  
 gctcctgcaa gaaagactcg tgactgccc gcgccccagg ctggactgag 1250  
 cccctcacgc cgccctgcag ccccatgcc cctgcccac atgctggggg 1300  
 tccagaagcc acctcggggt gactgagcgg aaggccaggc agggccttcc 1350  
 tccttttctt cctcccttc cctcgggagg gtcccagac cctggcatgg 1400  
 gatgggctgg gatTTTTTTT gtgaatccac ccctggctac cccaccctg 1450  
 gttaccccaa cggcatccca aggccagggt ggccctcagc tgagggaagg 1500  
 tacgagttcc cctgctggag cctgggaccc atggcacagg ccaggcagcc 1550  
 cggaggctgg gtggggcctc agtgggggct gctgcctgac cccagcaca 1600  
 ataaaaatga aacgtgaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1650  
 aaaaaaaagg gcggccgcga ctctagagtc gacctgcaga agcttggccg 1700  
 ccatggccca acttgtttat tgcagcttat aatggttaca aat 1743

<210> 2  
 <211> 295  
 <212> PRT  
 <213> Homo sapiens  
 <400> 2

Met	Thr	Asp	Ser	Pro	Pro	Pro	Gly	His	Pro	Glu	Glu	Lys	Ala	Thr		1	5	10	15
Pro	Pro	Gly	Gly	Thr	Gly	His	Glu	Gly	Leu	Ser	Gly	Gly	Ala	Ala		20	25	30	
Asp	Val	Ala	Ser	Gly	Val	Gly	Ser	Gly	Arg	His	Arg	Ala	Arg	Leu		35	40	45	
Pro	Ala	Arg	Pro	Leu	Gly	Cys	Val	Leu	Ser	Arg	Ala	His	Gly	Asp		50	55	60	
Pro	Val	Ser	Glu	Ser	Phe	Val	Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu		65	70	75	
Thr	Thr	Cys	Asp	Gly	His	Arg	Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile		80	85	90	
Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg		95	100	105	
Pro	Arg	Tyr	Ala	Cys	Cys	Pro	Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu		110	115	120	
Pro	Gly	Ala	Cys	Gly	Ala	Ala	Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn		125	130	135	
Gly	Gly	Ser	Cys	Val	Gln	Pro	Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly		140	145	150	
Trp	Arg	Gly	Asp	Thr	Cys	Gln	Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala		155	160	165	
Arg	Arg	Gly	Gly	Cys	Pro	Gln	Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser		170	175	180	
Tyr	Trp	Cys	Gln	Cys	Trp	Glu	Gly	His	Ser	Leu	Ser	Ala	Asp	Gly		185	190	195	
Thr	Leu	Cys	Val	Pro	Lys	Gly	Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn		200	205	210	
Pro	Thr	Gly	Val	Asp	Ser	Ala	Met	Lys	Glu	Glu	Val	Gln	Arg	Leu		215	220	225	
Gln	Ser	Arg	Val	Asp	Leu	Leu	Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu		230	235	240	
Ala	Pro	Leu	His	Ser	Leu	Ala	Ser	Gln	Ala	Leu	Glu	His	Gly	Leu		245	250	255	
Pro	Asp	Pro	Gly	Ser	Leu	Leu	Val	His	Ser	Phe	Gln	Gln	Leu	Gly		260	265	270	
Arg	Ile	Asp	Ser	Leu	Ser	Glu	Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln		275	280	285	
Leu	Gly	Ser	Cys	Ser	Cys	Lys	Lys	Asp	Ser										



<210> 3  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 3  
 tggagcagca atatgccagc c 21

<210> 4  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 4  
 ttttccactc ctgtcgggtt gg 22

<210> 5  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 5  
 ggtgacactt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 6  
 <211> 2945  
 <212> DNA  
 <213> Homo sapiens

<400> 6  
 cgctcgcccc gtcgccccct gcctccccgc agagtcccct cgcggcagca 50  
 gatgtgtgtg gggtcagccc acggcgggga ctatggtgaa attcccggcg 100  
 ctcacgcact actggcccct gatccggttc ttggtgcccc tgggcatcac 150  
 caacatagcc atcgacttcg gggagcaggc cttgaaccgg ggcattgctg 200  
 ctgtcaagga ggatgcagtc gagatgctgg ccagctacgg gctggcgtac 250  
 tccctcatga agttcttcac gggctccatg agtgacttca aaaatgtggg 300  
 cctggtgttt gtgaacagca agagagacag gaccaaagcc gtcctgtgta 350  
 tgggtggtggc aggggccatc gctgcogtct ttcacacact gatagcttat 400  
 agtgatttag gatactacat tatcaataaa ctgcaccatg tggacgagtc 450

ggtggggagc aagacgagaa gggccttcct gtacctgcc gcctttcctt 500  
 tcatggacgc aatggcatgg acccatgctg gcattctctt aaaacacaaa 550  
 tacagtttcc tgggtgggatg tgcctcaatc tcagatgtca tagctcaggt 600  
 tgtttttgta gccattttgc ttcacagtca cctggaatgc cgggagcccc 650  
 tgctcatccc gatcctctcc ttgtacatgg gcgcacttgt gcgctgcacc 700  
 accctgtgcc tgggctacta caagaacatt cacgacatca tccctgacag 750  
 aagtggcccc gagctggggg gagatgcaac aataagaaag atgctgagct 800  
 tctggtggcc tttggctcta attctggcca cacagagaat cagtcggcct 850  
 attgtcaacc tctttgtttc ccgggacctt ggtggcagtt ctgcagccac 900  
 agaggcagtg gcgattttga cagccacata ccctgtgggt cacatgccat 950  
 acggctgggt gacggaaatc cgtgctgtgt atcctgcttt cgacaagaat 1000  
 aaccccgaca acaaactggg gagcacgagc aacacagtca cggcagccca 1050  
 catcaagaag ttcaccttcg tctgcatggc tctgtcactc acgctctgtt 1100  
 tcgtgatgtt ttggacaccc aacgtgtctg agaaaatctt gatagacatc 1150  
 atcggagtgg actttgcctt tgcagaactc tgtgttggtc ctttgcggat 1200  
 cttctccttc ttcccagttc cagtcacagt gagggcgcat ctaccgggt 1250  
 ggctgatgac actgaagaaa accttcgtcc ttgccccag ctctgtgctg 1300  
 cggatcatcg tctcatcgc cagcctcgtg gtctaccct acctgggggt 1350  
 gcacggtgcg acctggggcg tgggctccct cctggcgggc tttgtgggag 1400  
 aatccaccat ggtcgccatc gctgcgtgct atgtctaccg gaagcagaaa 1450  
 aagaagatgg agaatgagtc ggccacggag ggggaagact ctgccatgac 1500  
 agacatgcct ccgacagagg aggtgacaga catcgtggaa atgagagagg 1550  
 agaatgaata aggcacggga cgccatgggc actgcaggga cggtcagtca 1600  
 ggatgacact toggcatcat ctcttcctc tcccatcgta tttgttccc 1650  
 tttttttgt tttgttttg taatgaaaga ggccttgatt taaaggtttc 1700  
 gtgtcaattc tctagcatac tgggtatgct cacactgacg gggggaccta 1750  
 gtgaatggtc tttactgttg ctatgtaaaa acaaacgaaa caactgactt 1800  
 catacccctg cctcagaaa acccaaaaga cacagctgcc tcacggttga 1850  
 cgttgtgtcc tctcccctg gacaatctcc tcttggaacc aaaggactgc 1900

agctgtgcc tgcgcctcg gtcacctgc acagcaggcc acagactctc 1950  
 ctgtccccct tcatcgctct taagaatcaa cagggttaaaa ctcggttcc 2000  
 tttgatttgc ttcccagtca catggccgta caaagagatg gagccccggt 2050  
 ggctctttaa atttcccttc tgccacggag ttcgaaacca tctactccac 2100  
 acatgcagga ggcgggtggc acgctgcagc ccggagtccc cgttcacact 2150  
 gaggaacgga gacctgtgac cacagcaggc tgacagatgg acagaatctc 2200  
 ccgtagaaag gtttggtttg aaatgccccg ggggcagcaa actgacatgg 2250  
 ttgaatgata gcatttcact ctgcgttctc ctagatctga gcaagctgtc 2300  
 agttctcacc cccaccgtgt atatacatga gctaactttt ttaaattgtc 2350  
 acaaaagcgc atctccagat tccagaccct gccgcatgac ttttctgaa 2400  
 ggcttgcttt tccctcgcct ttctgaagg tcgcattaga gcgagtcaca 2450  
 tggagcatcc taactttgca ttttagtttt tacagtgaac tgaagcttta 2500  
 agtctcatcc agcattctaa tgccagggtg ctgtagggtg acttttgaag 2550  
 tagatatatt acctggttct gctatcctta gtcataactc tgcggtacag 2600  
 gtaattgaga atgtactacg gtacttcctt cccacaccat acgataaagc 2650  
 aagacatttt ataacgatac cagagtcact atgtggctct ccctgaaata 2700  
 acgcattcga aatccatgca gtgcagtata tttttctaag ttttgaaaag 2750  
 cagggttttt cctttaaaaa aattatagac acggttcact aaattgattt 2800  
 agtcagaatt cctagactga aagaacctaa acaaaaaaat attttaaaga 2850  
 tataaatata tgctgtatat gttatgtaat ttattttagg ctataatata 2900  
 tttctatttt tcgcattttc aataaaatgt ctctaataca aaaaa 2945

<210> 7

<211> 492

<212> PRT

<213> Homo sapiens

<400> 7

Met	Val	Lys	Phe	Pro	Ala	Leu	Thr	His	Tyr	Trp	Pro	Leu	Ile	Arg
1					5				10					15

Phe	Leu	Val	Pro	Leu	Gly	Ile	Thr	Asn	Ile	Ala	Ile	Asp	Phe	Gly
				20					25					30

Glu	Gln	Ala	Leu	Asn	Arg	Gly	Ile	Ala	Ala	Val	Lys	Glu	Asp	Ala
			35					40						45

Val	Glu	Met	Leu	Ala	Ser	Tyr	Gly	Leu	Ala	Tyr	Ser	Leu	Met	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	50		55		60
Phe Phe Thr Gly Pro Met Ser Asp Phe Lys Asn Val Gly Leu Val	65		70		75
Phe Val Asn Ser Lys Arg Asp Arg Thr Lys Ala Val Leu Cys Met	80		85		90
Val Val Ala Gly Ala Ile Ala Ala Val Phe His Thr Leu Ile Ala	95		100		105
Tyr Ser Asp Leu Gly Tyr Tyr Ile Ile Asn Lys Leu His His Val	110		115		120
Asp Glu Ser Val Gly Ser Lys Thr Arg Arg Ala Phe Leu Tyr Leu	125		130		135
Ala Ala Phe Pro Phe Met Asp Ala Met Ala Trp Thr His Ala Gly	140		145		150
Ile Leu Leu Lys His Lys Tyr Ser Phe Leu Val Gly Cys Ala Ser	155		160		165
Ile Ser Asp Val Ile Ala Gln Val Val Phe Val Ala Ile Leu Leu	170		175		180
His Ser His Leu Glu Cys Arg Glu Pro Leu Leu Ile Pro Ile Leu	185		190		195
Ser Leu Tyr Met Gly Ala Leu Val Arg Cys Thr Thr Leu Cys Leu	200		205		210
Gly Tyr Tyr Lys Asn Ile His Asp Ile Ile Pro Asp Arg Ser Gly	215		220		225
Pro Glu Leu Gly Gly Asp Ala Thr Ile Arg Lys Met Leu Ser Phe	230		235		240
Trp Trp Pro Leu Ala Leu Ile Leu Ala Thr Gln Arg Ile Ser Arg	245		250		255
Pro Ile Val Asn Leu Phe Val Ser Arg Asp Leu Gly Gly Ser Ser	260		265		270
Ala Ala Thr Glu Ala Val Ala Ile Leu Thr Ala Thr Tyr Pro Val	275		280		285
Gly His Met Pro Tyr Gly Trp Leu Thr Glu Ile Arg Ala Val Tyr	290		295		300
Pro Ala Phe Asp Lys Asn Asn Pro Ser Asn Lys Leu Val Ser Thr	305		310		315
Ser Asn Thr Val Thr Ala Ala His Ile Lys Lys Phe Thr Phe Val	320		325		330
Cys Met Ala Leu Ser Leu Thr Leu Cys Phe Val Met Phe Trp Thr	335		340		345

Pro	Asn	Val	Ser	Glu	Lys	Ile	Leu	Ile	Asp	Ile	Ile	Gly	Val	Asp	
				350					355					360	
Phe	Ala	Phe	Ala	Glu	Leu	Cys	Val	Val	Pro	Leu	Arg	Ile	Phe	Ser	
				365					370					375	
Phe	Phe	Pro	Val	Pro	Val	Thr	Val	Arg	Ala	His	Leu	Thr	Gly	Trp	
				380					385					390	
Leu	Met	Thr	Leu	Lys	Lys	Thr	Phe	Val	Leu	Ala	Pro	Ser	Ser	Val	
				395					400					405	
Leu	Arg	Ile	Ile	Val	Leu	Ile	Ala	Ser	Leu	Val	Val	Leu	Pro	Tyr	
				410					415					420	
Leu	Gly	Val	His	Gly	Ala	Thr	Leu	Gly	Val	Gly	Ser	Leu	Leu	Ala	
				425					430					435	
Gly	Phe	Val	Gly	Glu	Ser	Thr	Met	Val	Ala	Ile	Ala	Ala	Cys	Tyr	
				440					445					450	
Val	Tyr	Arg	Lys	Gln	Lys	Lys	Lys	Met	Glu	Asn	Glu	Ser	Ala	Thr	
				455					460					465	
Glu	Gly	Glu	Asp	Ser	Ala	Met	Thr	Asp	Met	Pro	Pro	Thr	Glu	Glu	
				470					475					480	
Val	Thr	Asp	Ile	Val	Glu	Met	Arg	Glu	Glu	Asn	Glu				
				485					490						

<210> 8  
 <211> 535  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 33, 66, 96, 387  
 <223> unknown base

<400> 8  
 cctgacagaa gtgccccgga gctgggggag atncaacatt aagaagatgc 50  
 tgagcttctg gtgccttttg gctctaattc tggccacaca gagaancagt 100  
 cggcctattg tcaacctctt tgtttcccg gaccttggtg gcagttctgc 150  
 agccacagag gcagtggcga ttttgacagc cacataccct gtgggtcaca 200  
 tgccatacgg ctggttgacg gaaatccgtg ctgtgtatcc tgctttogac 250  
 aagaataacc ccagcaaca actggtgagc acgagcaaca cagtcacggc 300  
 ggcccacatc aagaagttca ccttcgtctg catggctctg tcaactcacgc 350  
 tctgtttcgt gatgttttgg acacccaacg tgtctgngaa aatcttgata 400  
 gacatcatcg gactggactt tgcctttgca gaactctgtg ttgttccttt 450

gcggatcttc tcctttcttc cagttccagt cacagtgagg gcgcattctca 500

ccgggtggct gatgacactg aagaaaacct tcgtc 535

<210> 9

<211> 434

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 32, 54, 80, 111, 117, 122, 139, 193, 205, 221, 226, 228, 273,  
293, 296, 305, 336, 358, 361

<223> unknown base

<400> 9

tgaagggaatc ccgggctggg tctcctgggt tngacaagat aaacccccag 50

caanaaattg gggagcaggg caaaacagtn acgggcagcc cacatcaaga 100

agttcacctt ngtttgnatg gntctgtcaa ctacagctnt gtttcgtgat 150

gttttgagaca ccaaagtgt ttgagaaaat tttgatagac atnatcggag 200

tggantttgc ctttgcagaa ntttgnngtg ttcctttgcg gattttctcc 250

tttttcccag ttccagtcac agngagggcg catctcaccg ggnggntgat 300

gacantgaag aaaacctttg tccttgcccc cagctntttg gtgcggatca 350

ttgtcctnat ngccagcctt gtggtcctac cctacctggg ggtgcacggt 400

gcgaccctgg gcgtgggttc cctcctggcg ggca 434

<210> 10

<211> 154

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 33, 49, 68, 83, 90, 98, 119

<223> unknown base

<400> 10

tattcccagt tccggtcacg gggagggcgc atntcaccgg gtggctgang 50

acactgaaga aaaccttngt ccttgcccc agntttgtgn tgcggatnat 100

cgtcctcatc gccagcctng tggctcctacc ctacctgggg gtgcacggtg 150

agac 154

<210> 11

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 11  
 ctgatccggt tcttggtgcc cctg 24  
  
 <210> 12  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 12  
 gctctgtcac tcacgctc 18  
  
 <210> 13  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 13  
 tcattctcttc cctctccc 18  
  
 <210> 14  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 14  
 ccttcgcgcca cggagtgc 18  
  
 <210> 15  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 15  
 ggcaaagtcc actccgatga tgtc 24  
  
 <210> 16  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe

<400> 16  
gcctgctgtg gtcacaggtc tccg 24

<210> 17

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 17

tcggggagca ggccttgaac cggggcattg ctgctgtcaa ggagg 45

<210> 18

<211> 1901

<212> DNA

<213> Homo sapiens

<400> 18

gccccgcgcc cggcgccggg cgcccgaagc cgggagccac cgccatgggg 50  
gcctgcctgg gagcctgtc cctgctcagc tgcgcgtcct gcctctgcgg 100  
ctctgcccc tgcatcctgt gcagctgctg ccccgccagc cgcaactcca 150  
ccgtgagccg cctcatcttc acgttcttcc tcttctggg ggtgctgggtg 200  
tccatcatta tgctgagccc gggcgtggag agtcagctct acaagctgcc 250  
ctgggtgtgt gaggagggg cgggatccc caccgtcctg cagggccaca 300  
tcgactgtgg ctccctgctt ggctaccgag ctgtctaccg catgtgcttc 350  
gccacggcgg ccttcttctt cttctttttc accctgctca tgctctgcgt 400  
gagcagcagc cgggaccccc gggctgccat ccagaatggg ttttggttct 450  
ttaagtctct gatcctgggt ggctcaccg tgggtgcctt ctacatccct 500  
gacggctcct tcaccaacat ctggttctac ttcggcgtcg tgggctcctt 550  
cctcttcate ctcatccagc tgggtgctgt catcgacttt gcgcaactcct 600  
ggaaccagcg gtggctgggc aaggccgagg agtgcgattc ccgtgcctgg 650  
tacgcaggcc tcttcttctt cactctctc ttctacttgc tgtcgatcgc 700  
ggcgtggcg ctgatgttca tgtactacac tgagcccagc ggctgccacg 750  
agggcaaggc cttcatcagc ctcaacctca cttctgtgt ctgcgtgtcc 800  
atcgctgctg tctgccccaa ggtccaggac gccagccca actcgggtct 850  
gctgcaggcc tcggtcatca ccctctacac catgtttgtc acctggtcag 900  
ccctatccag tatccctgaa cagaaatgca acccccattt gccaaaccag 950



ctgggcaacg agacagttgt ggcaggcccc gagggctatg agacccagtg 1000  
 gtgggatgcc ccgagcattg tgggcctcat catcttcctc ctgtgcaccc 1050  
 tcttcatcag tctgcgctcc tcagaccacc ggcaggtgaa cagcctgatg 1100  
 cagaccgagg agtgcaccacc tatgctagac gccacacagc agcagcagca 1150  
 gcaggtggca gcctgtgagg gccgggcctt tgacaacgag caggacggcg 1200  
 tcacctacag ctactccttc ttccacttct gcctggtgct ggctcactg 1250  
 cagtcattga tgacgtcac caactggtac aagcccgggtg agacccggaa 1300  
 gatgatcagc acgtggaccg ccgtgtgggt gaagatctgt gccagctggg 1350  
 cagggctgct cctctacctg tggaccctgg tagccccact cctcctgcgc 1400  
 aaccgcgact tcagctgagg cagcctcaca gcctgccatc tggcgcctcc 1450  
 tgccacctgg tgctctcgg ctcggtgaca gccaacctgc cccctcccca 1500  
 caccaatcag ccaggtgag cccccacccc tgccccagct ccaggacctg 1550  
 cccctgagcc gggccttcta gtcgtagtgc cttcagggtc cgaggagcat 1600  
 caggtcctg cagagcccca tcccccgcc acaccacac ggtggagctg 1650  
 cctcttcctt cccctcctcc ctgttgccca tactcagcat ctcggatgaa 1700  
 agggctccct tgcctcagg ctccacggga gcggggctgc tggagagagc 1750  
 ggggaactcc caccacagtg gggcatccgg cactgaagcc ctggtgttcc 1800  
 tggtcacgtc cccagggga cctgcccc ttctggact tcgtgcctta 1850  
 ctgagtctct aagacttttt ctaataaaca agccagtgcg tgtaaaaaaa 1900

a 1901

<210> 19

<211> 457

<212> PRT

<213> Homo sapiens

<400> 19

Met	Gly	Ala	Cys	Leu	Gly	Ala	Cys	Ser	Leu	Leu	Ser	Cys	Ala	Ser
1				5					10					15

Cys	Leu	Cys	Gly	Ser	Ala	Pro	Cys	Ile	Leu	Cys	Ser	Cys	Cys	Pro
			20						25					30

Ala	Ser	Arg	Asn	Ser	Thr	Val	Ser	Arg	Leu	Ile	Phe	Thr	Phe	Phe
			35						40					45

Leu	Phe	Leu	Gly	Val	Leu	Val	Ser	Ile	Ile	Met	Leu	Ser	Pro	Gly
			50						55					60

Val	Glu	Ser	Gln	Leu	Tyr	Lys	Leu	Pro	Trp	Val	Cys	Glu	Glu	Gly	65	70	75
Ala	Gly	Ile	Pro	Thr	Val	Leu	Gln	Gly	His	Ile	Asp	Cys	Gly	Ser	80	85	90
Leu	Leu	Gly	Tyr	Arg	Ala	Val	Tyr	Arg	Met	Cys	Phe	Ala	Thr	Ala	95	100	105
Ala	Phe	Phe	Phe	Phe	Phe	Phe	Thr	Leu	Leu	Met	Leu	Cys	Val	Ser	110	115	120
Ser	Ser	Arg	Asp	Pro	Arg	Ala	Ala	Ile	Gln	Asn	Gly	Phe	Trp	Phe	125	130	135
Phe	Lys	Phe	Leu	Ile	Leu	Val	Gly	Leu	Thr	Val	Gly	Ala	Phe	Tyr	140	145	150
Ile	Pro	Asp	Gly	Ser	Phe	Thr	Asn	Ile	Trp	Phe	Tyr	Phe	Gly	Val	155	160	165
Val	Gly	Ser	Phe	Leu	Phe	Ile	Leu	Ile	Gln	Leu	Val	Leu	Leu	Ile	170	175	180
Asp	Phe	Ala	His	Ser	Trp	Asn	Gln	Arg	Trp	Leu	Gly	Lys	Ala	Glu	185	190	195
Glu	Cys	Asp	Ser	Arg	Ala	Trp	Tyr	Ala	Gly	Leu	Phe	Phe	Phe	Thr	200	205	210
Leu	Leu	Phe	Tyr	Leu	Leu	Ser	Ile	Ala	Ala	Val	Ala	Leu	Met	Phe	215	220	225
Met	Tyr	Tyr	Thr	Glu	Pro	Ser	Gly	Cys	His	Glu	Gly	Lys	Val	Phe	230	235	240
Ile	Ser	Leu	Asn	Leu	Thr	Phe	Cys	Val	Cys	Val	Ser	Ile	Ala	Ala	245	250	255
Val	Leu	Pro	Lys	Val	Gln	Asp	Ala	Gln	Pro	Asn	Ser	Gly	Leu	Leu	260	265	270
Gln	Ala	Ser	Val	Ile	Thr	Leu	Tyr	Thr	Met	Phe	Val	Thr	Trp	Ser	275	280	285
Ala	Leu	Ser	Ser	Ile	Pro	Glu	Gln	Lys	Cys	Asn	Pro	His	Leu	Pro	290	295	300
Thr	Gln	Leu	Gly	Asn	Glu	Thr	Val	Val	Ala	Gly	Pro	Glu	Gly	Tyr	305	310	315
Glu	Thr	Gln	Trp	Trp	Asp	Ala	Pro	Ser	Ile	Val	Gly	Leu	Ile	Ile	320	325	330
Phe	Leu	Leu	Cys	Thr	Leu	Phe	Ile	Ser	Leu	Arg	Ser	Ser	Asp	His	335	340	345
Arg	Gln	Val	Asn	Ser	Leu	Met	Gln	Thr	Glu	Glu	Cys	Pro	Pro	Met			

	350		355		360
Leu Asp Ala Thr	Gln Gln Gln Gln Gln	Gln Val Ala Ala Cys Glu			
	365		370		375
Gly Arg Ala Phe	Asp Asn Glu Gln Asp	Gly Val Thr Tyr Ser Tyr			
	380		385		390
Ser Phe Phe His	Phe Cys Leu Val Leu	Ala Ser Leu His Val Met			
	395		400		405
Met Thr Leu Thr	Asn Trp Tyr Lys Pro	Gly Glu Thr Arg Lys Met			
	410		415		420
Ile Ser Thr Trp	Thr Ala Val Trp Val	Lys Ile Cys Ala Ser Trp			
	425		430		435
Ala Gly Leu Leu	Leu Tyr Leu Trp Thr	Leu Val Ala Pro Leu Leu			
	440		445		450
Leu Arg Asn Arg	Asp Phe Ser				
	455				

<210> 20

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 20

gccgcctcat cttcacgttc ttcc 24

<210> 21

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 21

tcattccagct ggtgctgctc 20

<210> 22

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 22

cttcttcac ttctgcctgg 20

<210> 23

<211> 18

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 23  
cctgggcaaa aatgcaac 18

<210> 24  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 24  
caggaatgta gaaggcacc acgg 24

<210> 25  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 25  
tggcacagat cttcacccac acgg 24

<210> 26  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 26  
tgtccatcat tatgctgagc ccgggcgtgg agagtcagct ctacaagctg 50

<210> 27  
<211> 1351  
<212> DNA  
<213> Homo sapiens

<400> 27  
gagcgaggcc ggggactgaa ggtgtgggtg tcgagccctc tggcagaggg 50  
ttaacctggg tcaaatgcac ggattctcac ctogtacagt tacgctctcc 100  
cgcggcacgt ccgcgaggac ttgaagtcct gagcgctcaa gtttgtccgt 150  
aggtcgagag aaggccatgg aggtgcogcc accggcaccg cggagctttc 200  
tctgtagagc attgtgccta tttccccgag tctttgctgc cgaagctgtg 250

actgocgatt cggaagtcct tgaggagcgt cagaagcggc ttccctacgt 300  
 cccagagccc tattaccgga aatctggatg ggaccgcctc cgggagctgt 350  
 ttggcaaaga tgaacagcag agaatttcaa aggaccttgc taatatctgt 400  
 aagaocggcag ctacagcagg catcattggc tgggtgtatg ggggaatacc 450  
 agctttttatt catgctaaac aacaatacat tgagcagagc caggcagaaa 500  
 tttatcataa ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca 550  
 cgaggcttca ttcgttatgg ctggcgctgg ggttggagaa ctgcagtgtt 600  
 tgtgactata ttcaacacag tgaacactag tctgaatgta taccgaaata 650  
 aagatgcctt aagccatttt gtaattgcag gagctgtcac ggggaagtctt 700  
 tttaggataa acgtaggcct gcgtggcctg gtggctgggtg gcataattgg 750  
 agccttgctg ggcactcctg taggaggcct gctgatggca tttcagaagt 800  
 acgctggtga gactgttcag gaaagaaaac agaaggatcg aaaggcactc 850  
 catgagctaa aactggaaga gtggaaaggc agactacaag ttactgagca 900  
 cctccctgag aaaattgaaa gtagtttacg ggaagatgaa cctgagaatg 950  
 atgctaagaa aattgaagca ctgctaaacc ttctagaaa cccttcagta 1000  
 atagataaac aagacaagga ctgaaagtgc tctgaacttg aaactcactg 1050  
 gagagctgaa gggagctgcc atgtccgatg aatgccaaca gacaggccac 1100  
 tctttggtca gcctgctgac aaatttaagt gctggtacct gtggtggcag 1150  
 tggcttgctc ttgtcttttt cttttctttt taactaagaa tggggctggt 1200  
 gtactctcac ttacttata cttaaattta aatacatact tatgtttgta 1250  
 ttaatctatc aatatatgca tacatggata tatccacca cctagatttt 1300  
 aagcagtaaa taaaacattt cgcaaaagat taaagttgaa ttttacagtt 1350

t 1351

<210> 28

<211> 285

<212> PRT

<213> Homo sapiens

<400> 28

Met	Glu	Val	Pro	Pro	Pro	Ala	Pro	Arg	Ser	Phe	Leu	Cys	Arg	Ala
1				5					10				15	

Leu	Cys	Leu	Phe	Pro	Arg	Val	Phe	Ala	Ala	Glu	Ala	Val	Thr	Ala
				20				25					30	

Asp	Ser	Glu	Val	Leu	Glu	Glu	Arg	Gln	Lys	Arg	Leu	Pro	Tyr	Val	35	40	45
Pro	Glu	Pro	Tyr	Tyr	Pro	Glu	Ser	Gly	Trp	Asp	Arg	Leu	Arg	Glu	50	55	60
Leu	Phe	Gly	Lys	Asp	Glu	Gln	Gln	Arg	Ile	Ser	Lys	Asp	Leu	Ala	65	70	75
Asn	Ile	Cys	Lys	Thr	Ala	Ala	Thr	Ala	Gly	Ile	Ile	Gly	Trp	Val	80	85	90
Tyr	Gly	Gly	Ile	Pro	Ala	Phe	Ile	His	Ala	Lys	Gln	Gln	Tyr	Ile	95	100	105
Glu	Gln	Ser	Gln	Ala	Glu	Ile	Tyr	His	Asn	Arg	Phe	Asp	Ala	Val	110	115	120
Gln	Ser	Ala	His	Arg	Ala	Ala	Thr	Arg	Gly	Phe	Ile	Arg	Tyr	Gly	125	130	135
Trp	Arg	Trp	Gly	Trp	Arg	Thr	Ala	Val	Phe	Val	Thr	Ile	Phe	Asn	140	145	150
Thr	Val	Asn	Thr	Ser	Leu	Asn	Val	Tyr	Arg	Asn	Lys	Asp	Ala	Leu	155	160	165
Ser	His	Phe	Val	Ile	Ala	Gly	Ala	Val	Thr	Gly	Ser	Leu	Phe	Arg	170	175	180
Ile	Asn	Val	Gly	Leu	Arg	Gly	Leu	Val	Ala	Gly	Gly	Ile	Ile	Gly	185	190	195
Ala	Leu	Leu	Gly	Thr	Pro	Val	Gly	Gly	Leu	Leu	Met	Ala	Phe	Gln	200	205	210
Lys	Tyr	Ala	Gly	Glu	Thr	Val	Gln	Glu	Arg	Lys	Gln	Lys	Asp	Arg	215	220	225
Lys	Ala	Leu	His	Glu	Leu	Lys	Leu	Glu	Glu	Trp	Lys	Gly	Arg	Leu	230	235	240
Gln	Val	Thr	Glu	His	Leu	Pro	Glu	Lys	Ile	Glu	Ser	Ser	Leu	Arg	245	250	255
Glu	Asp	Glu	Pro	Glu	Asn	Asp	Ala	Lys	Lys	Ile	Glu	Ala	Leu	Leu	260	265	270
Asn	Leu	Pro	Arg	Asn	Pro	Ser	Val	Ile	Asp	Lys	Gln	Asp	Lys	Asp	275	280	285

<210> 29

<211> 324

<212> DNA

<213> Homo sapiens

<400> 29

cggaagtccc ttgaggagcg tcagaagcgg cttccctacg tcccagagcc 50

ctattacccg gaatctggat gggaccgctc cgggagctgt ttggcaaaga 100  
 tgaacagcag agaatttcaa aggaccttgc taatatctgt aagacggcag 150  
 ctacagcagg catcattggc tgggtgtatg ggggaatacc agcttttatt 200  
 catgctaaac aacaatacat tgagcagagc caggcagaaa tttatcataa 250  
 ccggtttgat gctgtgcaat ctgcacatcg tgctgccaca cgaggcttca 300  
 ttcgttcatg gctggcgccg aacc 324

<210> 30  
 <211> 377  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 262, 330, 371  
 <223> unknown base

<400> 30  
 tcaagtttgt ccgtaggctc agagaaggcc atggaggctc cgccaccggc 50  
 accgcggagc ttttttctgt agagcattgt gcctatttcc ccgagttttt 100  
 gctgccgaag ctgtgactgc cgattcggaa gtccttgagg agcgtcagaa 150  
 gcggcttccc tacgtcccag agccctatta cccggaattt ggatgggacc 200  
 gcctccggga gctgtttggc aaagatgaac agcagagaat ttcaaaggac 250  
 cttgctgata tntgtaagac ggcagctaca gcaggcatca ttggctgggt 300  
 gtatggggga ataccagctt ttattcatgn taaacaacaa tacattgagc 350  
 agagccaggc agaaatttat nataacc 377

<210> 31  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 31  
 tcgtacagtt acgctctccc 20

<210> 32  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 32  
cttgaggagc gtcagaagcg 20

<210> 33

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 33

ataacgaatg aagcctcgtg 20

<210> 34

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 34

gctaatatct gtaagacggc agctacagca ggcattcattg 40

<210> 35

<211> 1819

<212> DNA

<213> Homo sapiens

<400> 35

gagccgccgc cgcgcgcgcgc cgcgcgactg cagccccagg ccccggcccc 50

ccaccacagt ctgcgttgct gcccgcctg ggccaggccc caaaggcaag 100

gacaaagcag ctgtcaggga acctccgccg gagtccaatt tacgtgcagc 150

tgccggcaac cacagggtcc aagatggttt gcgggggctt cgcgtgttcc 200

aagaactgcc tgtgcgccct caacctgctt tacacottgg ttagtctgct 250

gctaattgga attgctgcgt ggggcattgg cttcgggctg atttccagtc 300

tccgagtggc cggcgtggc attgcagtgg gcatcttctt gttcctgatt 350

gcttttagtg gtctgattgg agctgtaaaa catcatcagg tgttgctatt 400

tttttatatg attattctgt tacttgtatt tattgttcag tttctgtat 450

cttgccgttg tttagccctg aaccaggagc aacagggtca gcttctggag 500

gttggttgga acaatacggc aagtgctcga aatgacatcc agagaaatct 550

aaactgctgt gggttccgaa gtgttaaccc aaatgacacc tgtctggcta 600

gctgtgttaa aagtgaccac tcgtgctcgc catgtgctcc aatcatagga 650

gaatatgctg gagaggtttt gagatttggt ggtggcattg gcctgttctt 700



cagttttaca gagatcctgg gtgtttggct gacctacaga tacaggaacc 750  
agaaagaccc ccgcgcgaat cctagtgcac tcctttgatg agaaaacaag 800  
gaagatttcc tttcgtatta tgatcttggt cactttctgt aattttctgt 850  
taagctccat ttgccagttt aaggaaggaa acactatctg gaaaagtacc 900  
ttattgatag tggaattata tttttttact ctatgtttct ctacatgttt 950  
ttttctttcc gttgctgaaa aatatttgaa acttgtgggc tctgaagctc 1000  
ggtggcacct ggaatttact gtattcattg tcgggcactg tccactgtgg 1050  
cctttcttag cttttttacc tgcagaaaaa ctttgtatgg taccactgtg 1100  
ttggttatat ggtgaatctg aacgtacatc tcactggtat aattatatgt 1150  
agcactgtgc tgtgtagata gttcctactg gaaaaagagt ggaaatttat 1200  
taaaatcaga aagtatgaga tcctgttatg ttaagggaaa tccaaattcc 1250  
caattttttt tgggtctttt aggaaagatt gttgtggtaa aaagtgttag 1300  
tataaaaatg ataatttact tgtagtcttt tatgattaca ccaatgtatt 1350  
ctagaaatag ttatgtctta ggaaattgtg gtttaatttt tgacttttac 1400  
aggtaagtgc aaaggagaag tggtttcatg aaatgttcta atgtataata 1450  
acattttacc tcagcctcca tcagaatgga acgagttttg agtaatcagg 1500  
aagtatatct atatgatctt gatattgttt tataataatt tgaagtctaa 1550  
aagactgcat ttttaaacia gttagtatta atgcgttggc ccacgtagca 1600  
aaaagatatt tgattatctt aaaaattggt aaataccgtt ttcatgaaat 1650  
ttctcagtat tgtaacagca acttgtcaaa cctaagcata tttgaatatg 1700  
atctcccata atttgaaatt gaaatcgat tgtgtggctc tgtatattct 1750  
gttaaaaaat taaaggacag aaacctttct ttgtgtatgc atgtttgaat 1800  
taaaagaaag taatggaag 1819

<210> 36

<211> 204

<212> PRT

<213> Homo sapiens

<400> 36

Met	Val	Cys	Gly	Gly	Phe	Ala	Cys	Ser	Lys	Asn	Cys	Leu	Cys	Ala
1				5					10					15
Leu	Asn	Leu	Leu	Tyr	Thr	Leu	Val	Ser	Leu	Leu	Leu	Ile	Gly	Ile
				20					25					30

Ala	Ala	Trp	Gly	Ile	Gly	Phe	Gly	Leu	Ile	Ser	Ser	Leu	Arg	Val	35	40	45
Val	Gly	Val	Val	Ile	Ala	Val	Gly	Ile	Phe	Leu	Phe	Leu	Ile	Ala	50	55	60
Leu	Val	Gly	Leu	Ile	Gly	Ala	Val	Lys	His	His	Gln	Val	Leu	Leu	65	70	75
Phe	Phe	Tyr	Met	Ile	Ile	Leu	Leu	Leu	Val	Phe	Ile	Val	Gln	Phe	80	85	90
Ser	Val	Ser	Cys	Ala	Cys	Leu	Ala	Leu	Asn	Gln	Glu	Gln	Gln	Gly	95	100	105
Gln	Leu	Leu	Glu	Val	Gly	Trp	Asn	Asn	Thr	Ala	Ser	Ala	Arg	Asn	110	115	120
Asp	Ile	Gln	Arg	Asn	Leu	Asn	Cys	Cys	Gly	Phe	Arg	Ser	Val	Asn	125	130	135
Pro	Asn	Asp	Thr	Cys	Leu	Ala	Ser	Cys	Val	Lys	Ser	Asp	His	Ser	140	145	150
Cys	Ser	Pro	Cys	Ala	Pro	Ile	Ile	Gly	Glu	Tyr	Ala	Gly	Glu	Val	155	160	165
Leu	Arg	Phe	Val	Gly	Gly	Ile	Gly	Leu	Phe	Phe	Ser	Phe	Thr	Glu	170	175	180
Ile	Leu	Gly	Val	Trp	Leu	Thr	Tyr	Arg	Tyr	Arg	Asn	Gln	Lys	Asp	185	190	195
Pro	Arg	Ala	Asn	Pro	Ser	Ala	Phe	Leu							200		

<210> 37  
 <211> 390  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 20, 35, 61, 83, 106, 130, 133, 187, 232, 260, 336  
 <223> unknown base

<400> 37  
 tgattggagc tgtaaaaaan tcttcaggtg ttgtnatttt tttatatgat 50  
 tattctgtaa nttgtattta ttgttcagtt ttntgtatct tgcgcttggt 100  
 tagccntgaa ccaggagcaa cagggtcagn ttntggaggt tggttggaac 150  
 aatacggcaa gtgctcgaaa tgacatccag agaaatntaa actgctgtgg 200  
 gttccgaagt gttaacccaa atgacacctg tntggctagc tgtgttaaaa 250  
 gtgaccactn gtgctcgcca tgtgctccaa tcataggaga atatgctgga 300

gaggttttga gatttgttgg tggcattggc ctgttnttca gttttacaga 350  
gatcctgggt gtttggctga cctacagata caggaaccag 390

<210> 38  
<211> 566  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 27  
<223> unknown base

<400> 38  
aatcccaaat tccccaattt ttttggncctt tttagggaaa gatgtgttgt 50  
ggtaaaaagt gttagtataa aaatgataat ttacttgtag tcttttatga 100  
ttacaccaat gtattctaga atagtattgt cttaggaaat tgtggtttaa 150  
tttttgactt ttacaggtaa gtgcaaagga gaagtggttt catgaaatgt 200  
tctaattgtat aataacattt accttcagcc tcccatcaga atggaacgag 250  
ttttgagtaa tccaggaagt atatctatat gatcttgata ttgttttata 300  
taatttgaag tctaaaagac tgcattttta aacaagttag tattaatgcg 350  
ttggccccacg tagcaaaaag atatttgatt atcttaaaaa ttgttaaata 400  
ccgttttcat gaaagttctc agtattgtaa cagcaacttg tcaaacctaa 450  
gcataattga atatgatctc ccataatttg aaattgaaat cgtatttgtgt 500  
ggaggaaatg gcaatcttat gtgtgctgaa ggacacagta agagcaccaa 550  
gttgtgcccc acttgc 566

<210> 39  
<211> 264  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 84-85, 206  
<223> unknown base

<400> 39  
atgattatctc tgttacttgt atttattgtt cagttttatg gtatcttgcg 50  
cttgtttagc ccctgaaacc aggagcaaca gggnnacagc tcctggaggt 100  
tggttggtgcaa caatcacggc caagtgactc cgcaaatgac atcccagaga 150  
aatcctaaac tgctgtgggt tccgaagtgt taaccctaat gacacctgtc 200

tggtctngctg tgttaaaagt gaccactcgt gctcgccatg tgctccaatc 250

ataggagaat atgc 264

<210> 40

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 40

acccacgtct gcgttgctgc c 21

<210> 41

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 41

gagaatatgc tggagagg 18

<210> 42

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 42

aggaatgcac taggattcgc gcgg 24

<210> 43

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 43

ggccccaaag gcaaggacaa agcagctgtc agggaaacctc cgccg 45

<210> 44

<211> 2061

<212> DNA

<213> Homo sapiens

<400> 44

cagtcacat gaagctgggc tgtgtcctca tggcctgggc cctctacott 50

tcccttggtg tgctctgggt ggcccagatg ctactggctg ccagttttga 100

gacgctgcag tgtgagggac ctgtctgcac tgaggagagc agctgccaca 150  
 cggaggatga cttgactgat gcaaggggaag ctggcttcca ggtcaaggcc 200  
 tacactttca gtgaaccott ccacctgatt gtgtcctatg actggctgat 250  
 cctccaaggt ccagccaagc cagtttttga aggggacctg ctggttctgc 300  
 gctgccaggc ctggcaagac tggccactga ctcaggtgac cttctaccga 350  
 gatggctcag ctctgggtcc ccccgggcct aacaggggaat tctccatcac 400  
 cgtggtacaa aaggcagaca gcgggcaacta cactgcagt ggcattcttc 450  
 agagccctgg tcctgggatc ccagaaacag catctgttgt ggctatcaca 500  
 gtccaagaac tgtttccagc gccaatctc agagctgtac ctcagctga 550  
 accccaagca ggaagcccca tgaccctgag ttgtcagaca aagttgcccc 600  
 tgcagaggtc agctgcccgc ctctcttct cttctacaa ggatggaagg 650  
 atagtcaaaa gcagggggct ctctcagaa ttccagatcc ccacagcttc 700  
 agaagatcac tccgggtcat actggtgtga ggcagccact gaggacaacc 750  
 aagtttgaa acagagcccc cagctagaga tcagagtga gggtgcttc 800  
 agctctgctg cacctccac attgaatcca gctctcaga aatcagctgc 850  
 tccaggaact gctctgagg agggccctgg gcctctgcct ccgccgcaa 900  
 ccccatcttc tgaggatcca ggcttttctt ctctctggg gatgccagat 950  
 cctcatctgt atcaccagat gggccttctt ctcaaacaca tgcaggatgt 1000  
 gagagtcctc ctcggtcacc tgctcatgga gttgaggaa ttatctggcc 1050  
 accagaagcc tgggaccaca aaggtactg ctgaatagaa gtaaacagtt 1100  
 catccatgat ctacttaac caccccaata aatctgattc tttattttct 1150  
 cttctgtcc tgcacatatg cataagtact tttaacagtt gtcccagtgt 1200  
 tttgttagaa taatgtagt aggtgagtgt aaataaattt atataaagt 1250  
 agaattagag tttagctata attgtgtatt ctctcttaac acaacagaat 1300  
 tctgctgtct agatcaggaa tttctatctg ttatatcgac cagaatgttg 1350  
 tgatttaaag agaactaatg gaagtggatt gaatacagca gtctcaactg 1400  
 ggggcaattt tgccccccag aggacattgg gcaatgtttg gagacatttt 1450  
 ggtcattata cttgggggggt tgggggatgg tgggatgtgt gtctactggc 1500  
 atccagtaaa tagaagccag gggtgccgct aaacatccta taatgcacag 1550

ggcagtagccc cacaacgaaa aataatctgg cccaaaatgt cagttgtact 1600  
 gagtttgaga aaccccagcc taatgaaacc ctaggtgttg ggctctggaa 1650  
 tgggactttg tcccttctaa ttattatctc tttccagcct cattcagcta 1700  
 ttcttactga cataccagtc tttagctggt gctatggtct gttctttagt 1750  
 tctagtttgt atcccctcaa aagccattat gttgaaatcc taatcccca 1800  
 ggtgatggca ttaagaagtg ggcctttggg aagtgattag atcaggagtg 1850  
 cagagccctc atgattagga ttagtgccct tatttaaaaa ggccccagag 1900  
 agctaactca cccttcacc atatgaggac gtggcaagaa gatgacatgt 1950  
 atgagaacca aaaaacagct gtcgccaaac accgactctg tcgttgccct 2000  
 gatcttgaac ttccagcctc cagaactatg agaaataaaa ttctggttgt 2050  
 ttgtagccta a 2061

<210> 45  
 <211> 359  
 <212> PRT  
 <213> Homo sapiens

<400> 45  
 Met Lys Leu Gly Cys Val Leu Met Ala Trp Ala Leu Tyr Leu Ser  
 1 5 10 15  
 Leu Gly Val Leu Trp Val Ala Gln Met Leu Leu Ala Ala Ser Phe  
 20 25 30  
 Glu Thr Leu Gln Cys Glu Gly Pro Val Cys Thr Glu Glu Ser Ser  
 35 40 45  
 Cys His Thr Glu Asp Asp Leu Thr Asp Ala Arg Glu Ala Gly Phe  
 50 55 60  
 Gln Val Lys Ala Tyr Thr Phe Ser Glu Pro Phe His Leu Ile Val  
 65 70 75  
 Ser Tyr Asp Trp Leu Ile Leu Gln Gly Pro Ala Lys Pro Val Phe  
 80 85 90  
 Glu Gly Asp Leu Leu Val Leu Arg Cys Gln Ala Trp Gln Asp Trp  
 95 100 105  
 Pro Leu Thr Gln Val Thr Phe Tyr Arg Asp Gly Ser Ala Leu Gly  
 110 115 120  
 Pro Pro Gly Pro Asn Arg Glu Phe Ser Ile Thr Val Val Gln Lys  
 125 130 135  
 Ala Asp Ser Gly His Tyr His Cys Ser Gly Ile Phe Gln Ser Pro  
 140 145 150

Gly	Pro	Gly	Ile	Pro	Glu	Thr	Ala	Ser	Val	Val	Ala	Ile	Thr	Val	
				155					160					165	
Gln	Glu	Leu	Phe	Pro	Ala	Pro	Ile	Leu	Arg	Ala	Val	Pro	Ser	Ala	
				170					175					180	
Glu	Pro	Gln	Ala	Gly	Ser	Pro	Met	Thr	Leu	Ser	Cys	Gln	Thr	Lys	
				185					190					195	
Leu	Pro	Leu	Gln	Arg	Ser	Ala	Ala	Arg	Leu	Leu	Phe	Ser	Phe	Tyr	
				200					205					210	
Lys	Asp	Gly	Arg	Ile	Val	Gln	Ser	Arg	Gly	Leu	Ser	Ser	Glu	Phe	
				215					220					225	
Gln	Ile	Pro	Thr	Ala	Ser	Glu	Asp	His	Ser	Gly	Ser	Tyr	Trp	Cys	
				230					235					240	
Glu	Ala	Ala	Thr	Glu	Asp	Asn	Gln	Val	Trp	Lys	Gln	Ser	Pro	Gln	
				245					250					255	
Leu	Glu	Ile	Arg	Val	Gln	Gly	Ala	Ser	Ser	Ser	Ala	Ala	Pro	Pro	
				260					265					270	
Thr	Leu	Asn	Pro	Ala	Pro	Gln	Lys	Ser	Ala	Ala	Pro	Gly	Thr	Ala	
				275					280					285	
Pro	Glu	Glu	Ala	Pro	Gly	Pro	Leu	Pro	Pro	Pro	Pro	Thr	Pro	Ser	
				290					295					300	
Ser	Glu	Asp	Pro	Gly	Phe	Ser	Ser	Pro	Leu	Gly	Met	Pro	Asp	Pro	
				305					310					315	
His	Leu	Tyr	His	Gln	Met	Gly	Leu	Leu	Leu	Lys	His	Met	Gln	Asp	
				320					325					330	
Val	Arg	Val	Leu	Leu	Gly	His	Leu	Leu	Met	Glu	Leu	Arg	Glu	Leu	
				335					340					345	
Ser	Gly	His	Gln	Lys	Pro	Gly	Thr	Thr	Lys	Ala	Thr	Ala	Glu		
				350					355						

<210> 46

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 46

tgggctgtgt cctcatgg 18

<210> 47

<211> 18

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 47  
tttccagcgc caattctc 18

<210> 48  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 48  
agttcttgga ctgtgatagc cac 23

<210> 49  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 49  
aaacttggtt gtcctcagtg gctg 24

<210> 50  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 50  
gtgagggacc tgtctgcact gaggagagca gctgccacac ggagg 45

<210> 51  
<211> 2181  
<212> DNA  
<213> Homo sapiens

<400> 51  
cccacgcgtc cgcccacgcg tccgcccacg ggtccgccca cgcgtccggg 50  
ccaccagaag tttagacctc tttagtagca ggaggctgga agaaaggaca 100  
gaagtagctc tggctgtgat ggggatctta ctgggcctgc tactcctggg 150  
gcacctaaca gtggacactt atggccgtcc catcctggaa gtgccagaga 200  
gtgtaacagg accttggaag ggggatgtga atcttcctg cacctatgac 250  
cccctgcaag gctacacca agtcttggtg aagtggctgg tacaacgtgg 300  
ctcagaccct gtcaccatct ttctacgtga ctcttctgga gaccatatcc 350



agcaggcaaa gtaccagggc cgctgcatg tgagccacaa ggttccagga 400  
 gatgtatccc tccaattgag caccctggag atggatgacc ggagccacta 450  
 cacgtgtgaa gtcacctggc agactcctga tggcaaccaa gtcgtgagag 500  
 ataagattac tgagctccgt gtccagaaac tctctgtctc caagcccaca 550  
 gtgacaactg gcagcgggta tggcttcacg gtgccccagg gaatgaggat 600  
 tagccttcaa tgccaggctc ggggttctcc tcccatcagt tataatttgg 650  
 ataagcaaca gactaataac caggaaccca tcaaagtagc aaccctaagt 700  
 accttactct tcaagcctgc ggtgatagcc gactcaggct cctatttctg 750  
 cactgccaaag ggccagggtt gctctgagca gcacagcgac attgtgaagt 800  
 ttgtggtcaa agactcctca aagctactca agaccaagac tgaggcacct 850  
 acaacatga catacccctt gaaagcaaca tctacagtga agcagtcctg 900  
 ggactggacc actgacatgg atggctacct tggagagacc agtgctgggc 950  
 caggaaagag cctgcctgtc ttgcatca tcctcatcat ctcttgtgc 1000  
 tgtatggtgg tttttaccat ggcctatc atgctctgtc ggaagacatc 1050  
 ccaacaagag catgtctacg aagcagccag gtaagaaagt ctctcctctt 1100  
 ccatttttga ccccgctcct gccctcaatt ttgattactg gcaggaaatg 1150  
 tggaggaagg ggggtgtggc acagacccaa tcctaaggcc ggaggccttc 1200  
 agggtcagga catagctgcc ttccctctct caggcacctt ctgaggttgt 1250  
 tttggccctc tgaacacaaa ggataattta gatccatctg ccttctgctt 1300  
 ccagaatccc tgggtggtag gatcctgata attaattggc aagaattgag 1350  
 gcagaagggg gggaaaccag gaccacagcc ccaagtcctt tcttatgggt 1400  
 ggtgggctct tgggcatag ggcacatgcc agagaggcca acgactctgg 1450  
 agaaaccatg agggtgcca tcttcgcaag tggctgtctc agtgatgagc 1500  
 caacttccca gaatctgggc aacaactact ctgatgagcc ctgcatagga 1550  
 caggagtacc agatcatcgc ccagatcaat ggcaactacg cccgcctgct 1600  
 ggacacagtt cctctggatt atgagtttct ggccactgag ggcaaaagt 1650  
 tctgttaaaa atgccccatt aggccaggat ctgctgacat aattgcctag 1700  
 tcagtccttg ccttctgcat ggccttcttc cctgctacct ctcttcctgg 1750  
 atagcccaaa gtgtccgctt accaactctg gagccgctgg gagtcactgg 1800

ctttgccctg gaatttgcca gatgcatctc aagtaagcca gctgctggat 1850  
 ttggctctgg gcccttctag tatctctgcc gggggcttct ggtactcctc 1900  
 tctaaatacc agagggaaga tgcccatagc actaggactt ggtcatcatg 1950  
 cctacagaca ctattcaact ttggcatctt gccaccagaa gacccgaggg 2000  
 aggctcagct ctgccagctc agaggaccag ctatatccag gatcatttct 2050  
 ctttcttcag ggccagacag cttttaattg aaattgttat ttcacaggcc 2100  
 agggttcagt tctgctcctc cactataagt ctaatgttct gactctctcc 2150  
 tggtgctcaa taaatatcta atcataacag c 2181

<210> 52

<211> 321

<212> PRT

<213> Homo sapiens

<400> 52

Met	Gly	Ile	Leu	Leu	Gly	Leu	Leu	Leu	Leu	Gly	His	Leu	Thr	Val	1	5	10	15
Asp	Thr	Tyr	Gly	Arg	Pro	Ile	Leu	Glu	Val	Pro	Glu	Ser	Val	Thr	20	25	30	
Gly	Pro	Trp	Lys	Gly	Asp	Val	Asn	Leu	Pro	Cys	Thr	Tyr	Asp	Pro	35	40	45	
Leu	Gln	Gly	Tyr	Thr	Gln	Val	Leu	Val	Lys	Trp	Leu	Val	Gln	Arg	50	55	60	
Gly	Ser	Asp	Pro	Val	Thr	Ile	Phe	Leu	Arg	Asp	Ser	Ser	Gly	Asp	65	70	75	
His	Ile	Gln	Gln	Ala	Lys	Tyr	Gln	Gly	Arg	Leu	His	Val	Ser	His	80	85	90	
Lys	Val	Pro	Gly	Asp	Val	Ser	Leu	Gln	Leu	Ser	Thr	Leu	Glu	Met	95	100	105	
Asp	Asp	Arg	Ser	His	Tyr	Thr	Cys	Glu	Val	Thr	Trp	Gln	Thr	Pro	110	115	120	
Asp	Gly	Asn	Gln	Val	Val	Arg	Asp	Lys	Ile	Thr	Glu	Leu	Arg	Val	125	130	135	
Gln	Lys	Leu	Ser	Val	Ser	Lys	Pro	Thr	Val	Thr	Thr	Gly	Ser	Gly	140	145	150	
Tyr	Gly	Phe	Thr	Val	Pro	Gln	Gly	Met	Arg	Ile	Ser	Leu	Gln	Cys	155	160	165	
Gln	Ala	Arg	Gly	Ser	Pro	Pro	Ile	Ser	Tyr	Ile	Trp	Tyr	Lys	Gln	170	175	180	

Gln	Thr	Asn	Asn	Gln	Glu	Pro	Ile	Lys	Val	Ala	Thr	Leu	Ser	Thr	
				185					190					195	
Leu	Leu	Phe	Lys	Pro	Ala	Val	Ile	Ala	Asp	Ser	Gly	Ser	Tyr	Phe	
				200					205					210	
Cys	Thr	Ala	Lys	Gly	Gln	Val	Gly	Ser	Glu	Gln	His	Ser	Asp	Ile	
				215					220					225	
Val	Lys	Phe	Val	Val	Lys	Asp	Ser	Ser	Lys	Leu	Leu	Lys	Thr	Lys	
				230					235					240	
Thr	Glu	Ala	Pro	Thr	Thr	Met	Thr	Tyr	Pro	Leu	Lys	Ala	Thr	Ser	
				245					250					255	
Thr	Val	Lys	Gln	Ser	Trp	Asp	Trp	Thr	Thr	Asp	Met	Asp	Gly	Tyr	
				260					265					270	
Leu	Gly	Glu	Thr	Ser	Ala	Gly	Pro	Gly	Lys	Ser	Leu	Pro	Val	Phe	
				275					280					285	
Ala	Ile	Ile	Leu	Ile	Ile	Ser	Leu	Cys	Cys	Met	Val	Val	Phe	Thr	
				290					295					300	
Met	Ala	Tyr	Ile	Met	Leu	Cys	Arg	Lys	Thr	Ser	Gln	Gln	Glu	His	
				305					310					315	
Val	Tyr	Glu	Ala	Ala	Arg										
				320											

<210> 53

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 53

tatccctcca attgagcacc ctgg 24

<210> 54

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 54

gtcgaagac atcccaacaa g 21

<210> 55

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 55

cttcacaatg tcgctgtgct gctc 24

<210> 56

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 56

agccaaatcc agcagctggc ttac 24

<210> 57

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 57

tggatgaccg gagccactac acgtgtgaag tcacctggca gactcctgat 50

<210> 58

<211> 2458

<212> DNA

<213> Homo sapiens

<400> 58

gcgccgggag cccatctgcc cccaggggca cggggcgcg ggccggctcc 50

cgcccggcac atggctgcag ccacctcgcg cgcacccga ggccggcgcg 100

ccagctcgcc cgaggtccgt cggaggcgcc cggccgcccc ggagccaagc 150

agcaactgag cggggaagcg cccgcgtccg gggatcgga tgtccctcct 200

ccttctctc ttgctagttt cctactatgt tggaaacctg gggactcaca 250

ctgagatcaa gagagtggca gaggaaaagg tcactttgcc ctgccaccat 300

caactggggc ttccagaaaa agacactctg gatattgaat ggctgctcac 350

cgataatgaa gggaaacaaa aagtggatgat cacttactcc agtcgtcatg 400

tctacaataa cttgactgag gaacagaagg gccgagtggc ctttgcttcc 450

aatttcctgg caggagatgc ctccttgag attgaacctc tgaagcccag 500

tgatgagggc cggtagacct gtaagggttaa gaattcaggc cgctacgtgt 550

ggagccatgt catcttaaaa gtcttagtga gaccatccaa gcccgaagtgt 600

gagttggaag gagagctgac agaaggaagt gacctgactt tgcagtgtga 650

gtcacacctt ggcacagagc ccattgtgta ttactggcag cgaatccgag 700  
 agaaagaggg agaggatgaa cgtctgcctc ccaaactag gattgactac 750  
 aaccaccctg gacgagttct gctgcagaat cttaccatgt cctactctgg 800  
 actgtaccag tgcacagcag gcaacgaagc tgggaaggaa agctgtgtgg 850  
 tgcgagtaac tgtacagtat gtacaaagca tcggcatggg tgcaggagca 900  
 gtgacaggca tagtggctgg agccctgctg attttcctct tgggtgtggct 950  
 gctaataccga aggaaagaca aagaaagata tgaggaagaa gagagacctt 1000  
 atgaaattcg agaagatgct gaagctccaa aagcccgctt tgtgaaacct 1050  
 agctcctctt cctcaggctc tcggagctca cgctctgggt cttcctccac 1100  
 tcgctccaca gcaaatagtg cctcacgcag ccagcggaca ctgtcaactg 1150  
 acgcagcacc ccagccaggg ctggccaccc aggcatacag cctagtgggg 1200  
 ccagaggtga gaggttctga accaaagaaa gtccaccatg ctaactctgac 1250  
 caaagcagaa accacaccca gcatgatccc cagccagagc agagccttcc 1300  
 aaacggctctg aattacaatg gacttgactc ccacgctttc ctaggagtca 1350  
 ggggtctttg actcttctcg tcattggagc tcaagtcacc agccacacaa 1400  
 ccagatgaga ggtcatctaa gtagcagtga gcattgcacg gaacagattc 1450  
 agatgagcat tttccttata caataccaaa caagcaaaag gatgtaagct 1500  
 gattcatctg taaaaaggca tcttattgtg ccttttagacc agagtaaggg 1550  
 aaagcaggag tccaaatcta tttgttgacc aggacctgtg gtgagaagg 1600  
 tggggaaagg tgaggtgaat atacctaaaa cttttaatgt gggatatatt 1650  
 gtatcagtgc tttgattcac aattttcaag aggaaatggg atgctgtttg 1700  
 taaattttct atgcatttct gcaaacttat tggattatta gttattcaga 1750  
 cagtcaagca gaaccacag ccttattaca cctgtctaca ccatgtactg 1800  
 agctaaccac ttctaagaaa ctccaaaaaa ggaaacatgt gtcttctatt 1850  
 ctgacttaac ttcatttgtc ataaggtttg gatattaatt tcaaggggag 1900  
 ttgaaatagt gggagatgga gaagagtga ttaggtttct ccactctata 1950  
 ctaatctcac tatttgtatt gagcccaaaa taactatgaa aggagacaaa 2000  
 aatttgtgac aaaggattgt gaagagcttt ccatcttcat gatgttatga 2050  
 ggattgttga caaacattag aaatatataa tggagcaatt gtggatttcc 2100

cctcaaatca gatgcctcta aggactttcc tgctagatat ttctggaagg 2150  
 agaaaataca acatgtcatt tatcaacgtc cttagaaaga attcttctag 2200  
 agaaaaaggg atctaggaat gctgaaagat tacccaacat accattatag 2250  
 tctcttcttt ctgagaaaat gtgaaaccag aattgcaaga ctgggtggac 2300  
 tagaaagga gattagatca gttttctctt aatatgtcaa ggaaggtagc 2350  
 cgggcatggt gccaggcacc tgtaggaaaa tccagcaggt ggaggttgca 2400  
 gtgagccgag attatgccat tgcactccag cctgggtgac agagcgggac 2450  
 tccgtctc 2458

<210> 59

<211> 373

<212> PRT

<213> Homo sapiens

<400> 59

Met	Ser	Leu	Leu	Leu	Leu	Leu	Leu	Leu	Val	Ser	Tyr	Tyr	Val	Gly	1	5	10	15
Thr	Leu	Gly	Thr	His	Thr	Glu	Ile	Lys	Arg	Val	Ala	Glu	Glu	Lys	20	25	30	
Val	Thr	Leu	Pro	Cys	His	His	Gln	Leu	Gly	Leu	Pro	Glu	Lys	Asp	35	40	45	
Thr	Leu	Asp	Ile	Glu	Trp	Leu	Leu	Thr	Asp	Asn	Glu	Gly	Asn	Gln	50	55	60	
Lys	Val	Val	Ile	Thr	Tyr	Ser	Ser	Arg	His	Val	Tyr	Asn	Asn	Leu	65	70	75	
Thr	Glu	Glu	Gln	Lys	Gly	Arg	Val	Ala	Phe	Ala	Ser	Asn	Phe	Leu	80	85	90	
Ala	Gly	Asp	Ala	Ser	Leu	Gln	Ile	Glu	Pro	Leu	Lys	Pro	Ser	Asp	95	100	105	
Glu	Gly	Arg	Tyr	Thr	Cys	Lys	Val	Lys	Asn	Ser	Gly	Arg	Tyr	Val	110	115	120	
Trp	Ser	His	Val	Ile	Leu	Lys	Val	Leu	Val	Arg	Pro	Ser	Lys	Pro	125	130	135	
Lys	Cys	Glu	Leu	Glu	Gly	Glu	Leu	Thr	Glu	Gly	Ser	Asp	Leu	Thr	140	145	150	
Leu	Gln	Cys	Glu	Ser	Ser	Ser	Gly	Thr	Glu	Pro	Ile	Val	Tyr	Tyr	155	160	165	
Trp	Gln	Arg	Ile	Arg	Glu	Lys	Glu	Gly	Glu	Asp	Glu	Arg	Leu	Pro	170	175	180	

Pro Lys Ser Arg	Ile Asp Tyr Asn His	Pro Gly Arg Val Leu Leu	185	190	195
Gln Asn Leu Thr	Met Ser Tyr Ser Gly	Leu Tyr Gln Cys Thr Ala	200	205	210
Gly Asn Glu Ala	Gly Lys Glu Ser Cys	Val Val Arg Val Thr Val	215	220	225
Gln Tyr Val Gln	Ser Ile Gly Met Val	Ala Gly Ala Val Thr Gly	230	235	240
Ile Val Ala Gly	Ala Leu Leu Ile Phe	Leu Leu Val Trp Leu Leu	245	250	255
Ile Arg Arg Lys	Asp Lys Glu Arg Tyr	Glu Glu Glu Glu Arg Pro	260	265	270
Asn Glu Ile Arg	Glu Asp Ala Glu Ala	Pro Lys Ala Arg Leu Val	275	280	285
Lys Pro Ser Ser	Ser Ser Ser Gly Ser	Arg Ser Ser Arg Ser Gly	290	295	300
Ser Ser Ser Thr	Arg Ser Thr Ala Asn	Ser Ala Ser Arg Ser Gln	305	310	315
Arg Thr Leu Ser	Thr Asp Ala Ala Pro	Gln Pro Gly Leu Ala Thr	320	325	330
Gln Ala Tyr Ser	Leu Val Gly Pro Glu	Val Arg Gly Ser Glu Pro	335	340	345
Lys Lys Val His	His Ala Asn Leu Thr	Lys Ala Glu Thr Thr Pro	350	355	360
Ser Met Ile Pro	Ser Gln Ser Arg Ala	Phe Gln Thr Val	365	370	

<210> 60

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 60

ccagtgcaca gcaggcaacg aagc 24

<210> 61

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 61  
actaggctgt atgcctgggt gggc 24

<210> 62

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 62

gtatgtacaa agcatcggca tggttgcagg agcagtgaca ggc 43

<210> 63

<211> 3534

<212> DNA

<213> Homo sapiens

<400> 63

gtogttcctt tgctctctcg cgcccagtc tctccctgg ttctcctcag 50  
ccgctgtcgg aggagagcac ccggagacgc gggctgcagt cgcggcggct 100  
tctccccgcc tgggcggcct cgccgctggg caggtgctga gcgcccctag 150  
agcctccctt gccgcctccc tctctgccc ggccgcagca gtgcacatgg 200  
ggtgttgag gtagatgggc tcccgccccg ggaggcggcg gtggatgcgg 250  
cgctgggcag aagcagccgc cgattccagc tgccccgcgc gccccgggcg 300  
cccctgcgag tccccgggtc agccatgggg acctctccga gcagcagcac 350  
cgccctcgcc tctgcagcc gcctcgccc cggagccaca gccacgatga 400  
tcgcgggctc ccttctctcg cttggattcc ttagcaccac cacagctcag 450  
ccagaacaga aggcctcgaa tctcattggc acataccgcc atgttgaccg 500  
tgccaccggc caggtgctaa cctgtgacaa gtgtccagca ggaacctatg 550  
tctctgagca ttgtaccaac acaagcctgc gcgtctgcag cagttgccct 600  
gtggggacct ttaccaggca tgagaatggc atagagaaat gccatgactg 650  
tagtcagcca tgcccatggc caatgattga gaaattacct tgtgctgcct 700  
tgactgaccg agaatgcact tgcccacctg gcattgtcca gtctaacgct 750  
acctgtgccc cccatacggg gtgtcctgtg gggtgggggtg tgcggaagaa 800  
agggacagag actgaggatg tgcggtgtaa gcagtgtgct cggggctacct 850  
tctcagatgt gccttctagt gtgatgaaat gcaaagcata cacagactgt 900  
ctgagtcaga acctggtggt gatcaagccg gggaccaagg agacagacaa 950



cgtctgtggc acactcccgt ccttctccag ctccacctca ccttcccctg 1000  
 gcacagccat ctttccacgc cctgagcaca tggaaaccca tgaagtcctt 1050  
 tcttccactt atgttcccaa aggcatgaac tcaacagaat ccaactcttc 1100  
 tgcctctgtt agaccaaagg tactgagtag catccaggaa gggacagtcc 1150  
 ctgacaacac aagctcagca agggggaagg aagacgtgaa caagaccctc 1200  
 ccaaaccctt aggtagtcaa ccaccagcaa ggccccacc acagacacat 1250  
 cctgaagctg ctgccgtcca tggaggccac tgggggcgag aagtccagca 1300  
 cgcccatcaa gggccccaag aggggacatc ctagacagaa cctacacaag 1350  
 cattttgaca tcaatgagca tttgccctgg atgattgtgc ttttctgct 1400  
 gctggtgctt gtggtgattg tgggtgtcag tatccgaaa agctcgagga 1450  
 ctctgaaaaa ggggccccgg caggatccca gtgccattgt ggaaaaggca 1500  
 gggctgaaga aatccatgac tccaaccag aaccgggaga aatggatcta 1550  
 ctactgcaat ggccatggtg tcgatatcct gaagcttgta gcagcccaag 1600  
 tgggaagcca gtggaagat atctatcagt ttctttgcaa tgccagttag 1650  
 agggaggttg ctgctttctc caatgggtac acagccgacc acgagcgggc 1700  
 ctacgcagct ctgcagcact ggaccatccg gggccccgag gccagcctcg 1750  
 cccagctaata tagcgccctg cgccagcacc ggagaaacga tgttgtggag 1800  
 aagattogtg ggctgatgga agacaccacc cagctggaaa ctgacaaaact 1850  
 agctctcccg atgagcccca gcccgcttag cccgagcccc atccccagcc 1900  
 ccaacgcgaa acttgagaat tccgctctcc tgacggtgga gccttcccca 1950  
 caggacaaga acaagggtt ctctgtggat gagtcggagc cccttctccg 2000  
 ctgtgactct acatccagcg gctcctccgc gctgagcagg aacggttcct 2050  
 ttattaccaa agaaaagaag gacacagtgt tgcggcaggc acgcctggac 2100  
 ccctgtgact tgcagcctat ctttgatgac atgctccact ttctaaatcc 2150  
 tgaggagctg cgggtgattg aagagattcc ccaggctgag gacaaaactag 2200  
 accggctatt cgaaattatt ggagtcaaga gccaggaagc cagccagacc 2250  
 ctctggact ctgtttatag ccatcttctt gacctgctgt agaacatagg 2300  
 gatactgcat tctggaaatt actcaattta gtggcagggt ggttttttta 2350  
 ttttctctg tttctgattt ttgttgtttg ggggtgtgtgt gtgtgtttgt 2400

gtgtgtgtgt gtgtgtgtgt gtgtgtgtgt gtttaacaga gaatatggcc 2450  
 agtgcttgag ttctttctcc ttctctctct ctcttttttt ttttaataac 2500  
 tcttctggga agttggttta taagcctttg ccagggtgaa ctgttgtgaa 2550  
 ataccaccca cttaaagtttt ttaagttcca tattttctcc attttgcctt 2600  
 cttatgtatt ttcaagatta ttctgtgcac tttaaattta cttaacttac 2650  
 cataaatgca gtgtgacttt tcccacacac tggattgtga ggctcttaac 2700  
 ttcttaaaag tataatggca tcttgtgaat cctataagca gtctttatgt 2750  
 ctcttaacat tcacacctac tttttaaaaa caaatattat tactattttt 2800  
 attattgttt gtcctttata aattttctta aagattaaga aaatttaaga 2850  
 cccattgag ttactgtaat gcaattcaac tttgagttat cttttaaata 2900  
 tgtcttgtat agttcatatt catggctgaa acttgaccac actattgctg 2950  
 attgtatggt tttcacctgg acaccgtgta gaatgcttga ttacttgtac 3000  
 tcttcttatg ctaatatgct ctgggctgga gaaatgaaat cctcaagcca 3050  
 tcaggatttg ctatttaagt ggcttgacaa ctgggccacc aaagaacttg 3100  
 aacttcacct tttaggattt gagctgttct ggaacacatt gctgcacttt 3150  
 ggaaagtcaa aatcaagtgc cagtggcgcc ctttccatag agaatttgcc 3200  
 cagctttgct ttaaaagatg tcttgttttt tatatacaca taatcaatag 3250  
 gtccaatctg ctctcaaggc cttggtcctg gtgggattcc ttcaccaatt 3300  
 actttaatta aaaatggctg caactgtaag aacccttgtc tgatatattt 3350  
 gcaactatgc tcccatttac aaatgtacct tctaattgctc agttgccagg 3400  
 ttccaatgca aagggtggcgt ggactccctt tgtgtgggtg gggtttgtgg 3450  
 gtagtggtga aggaccgata tcagaaaaat gccttcaagt gtactaattt 3500  
 attaataaac attaggtggt tggttaaaaa aaaa 3534

<210> 64

<211> 655

<212> PRT

<213> Homo sapiens

<400> 64

Met	Gly	Thr	Ser	Pro	Ser	Ser	Ser	Thr	Ala	Leu	Ala	Ser	Cys	Ser
1				5					10				15	

Arg	Ile	Ala	Arg	Arg	Ala	Thr	Ala	Thr	Met	Ile	Ala	Gly	Ser	Leu
			20						25					30

Leu	Leu	Leu	Gly	Phe	Leu	Ser	Thr	Thr	Thr	Ala	Gln	Pro	Glu	Gln		35	40	45
Lys	Ala	Ser	Asn	Leu	Ile	Gly	Thr	Tyr	Arg	His	Val	Asp	Arg	Ala		50	55	60
Thr	Gly	Gln	Val	Leu	Thr	Cys	Asp	Lys	Cys	Pro	Ala	Gly	Thr	Tyr		65	70	75
Val	Ser	Glu	His	Cys	Thr	Asn	Thr	Ser	Leu	Arg	Val	Cys	Ser	Ser		80	85	90
Cys	Pro	Val	Gly	Thr	Phe	Thr	Arg	His	Glu	Asn	Gly	Ile	Glu	Lys		95	100	105
Cys	His	Asp	Cys	Ser	Gln	Pro	Cys	Pro	Trp	Pro	Met	Ile	Glu	Lys		110	115	120
Leu	Pro	Cys	Ala	Ala	Leu	Thr	Asp	Arg	Glu	Cys	Thr	Cys	Pro	Pro		125	130	135
Gly	Met	Phe	Gln	Ser	Asn	Ala	Thr	Cys	Ala	Pro	His	Thr	Val	Cys		140	145	150
Pro	Val	Gly	Trp	Gly	Val	Arg	Lys	Lys	Gly	Thr	Glu	Thr	Glu	Asp		155	160	165
Val	Arg	Cys	Lys	Gln	Cys	Ala	Arg	Gly	Thr	Phe	Ser	Asp	Val	Pro		170	175	180
Ser	Ser	Val	Met	Lys	Cys	Lys	Ala	Tyr	Thr	Asp	Cys	Leu	Ser	Gln		185	190	195
Asn	Leu	Val	Val	Ile	Lys	Pro	Gly	Thr	Lys	Glu	Thr	Asp	Asn	Val		200	205	210
Cys	Gly	Thr	Leu	Pro	Ser	Phe	Ser	Ser	Ser	Thr	Ser	Pro	Ser	Pro		215	220	225
Gly	Thr	Ala	Ile	Phe	Pro	Arg	Pro	Glu	His	Met	Glu	Thr	His	Glu		230	235	240
Val	Pro	Ser	Ser	Thr	Tyr	Val	Pro	Lys	Gly	Met	Asn	Ser	Thr	Glu		245	250	255
Ser	Asn	Ser	Ser	Ala	Ser	Val	Arg	Pro	Lys	Val	Leu	Ser	Ser	Ile		260	265	270
Gln	Glu	Gly	Thr	Val	Pro	Asp	Asn	Thr	Ser	Ser	Ala	Arg	Gly	Lys		275	280	285
Glu	Asp	Val	Asn	Lys	Thr	Leu	Pro	Asn	Leu	Gln	Val	Val	Asn	His		290	295	300
Gln	Gln	Gly	Pro	His	His	Arg	His	Ile	Leu	Lys	Leu	Leu	Pro	Ser		305	310	315
Met	Glu	Ala	Thr	Gly	Gly	Glu	Lys	Ser	Ser	Thr	Pro	Ile	Lys	Gly				

320	325	330
Pro Lys Arg Gly His	Pro Arg Gln Asn Leu His Lys His Phe Asp	
335	340	345
Ile Asn Glu His Leu	Pro Trp Met Ile Val Leu Phe Leu Leu Leu	
350	355	360
Val Leu Val Val Ile	Val Val Cys Ser Ile Arg Lys Ser Ser Arg	
365	370	375
Thr Leu Lys Lys Gly	Pro Arg Gln Asp Pro Ser Ala Ile Val Glu	
380	385	390
Lys Ala Gly Leu Lys	Lys Ser Met Thr Pro Thr Gln Asn Arg Glu	
395	400	405
Lys Trp Ile Tyr Tyr	Cys Asn Gly His Gly Ile Asp Ile Leu Lys	
410	415	420
Leu Val Ala Ala Gln	Val Gly Ser Gln Trp Lys Asp Ile Tyr Gln	
425	430	435
Phe Leu Cys Asn Ala	Ser Glu Arg Glu Val Ala Ala Phe Ser Asn	
440	445	450
Gly Tyr Thr Ala Asp	His Glu Arg Ala Tyr Ala Ala Leu Gln His	
455	460	465
Trp Thr Ile Arg Gly	Pro Glu Ala Ser Leu Ala Gln Leu Ile Ser	
470	475	480
Ala Leu Arg Gln His	Arg Arg Asn Asp Val Val Glu Lys Ile Arg	
485	490	495
Gly Leu Met Glu Asp	Thr Thr Gln Leu Glu Thr Asp Lys Leu Ala	
500	505	510
Leu Pro Met Ser Pro	Ser Pro Leu Ser Pro Ser Pro Ile Pro Ser	
515	520	525
Pro Asn Ala Lys Leu	Glu Asn Ser Ala Leu Leu Thr Val Glu Pro	
530	535	540
Ser Pro Gln Asp Lys	Asn Lys Gly Phe Phe Val Asp Glu Ser Glu	
545	550	555
Pro Leu Leu Arg Cys	Asp Ser Thr Ser Ser Gly Ser Ser Ala Leu	
560	565	570
Ser Arg Asn Gly Ser	Phe Ile Thr Lys Glu Lys Lys Asp Thr Val	
575	580	585
Leu Arg Gln Val Arg	Leu Asp Pro Cys Asp Leu Gln Pro Ile Phe	
590	595	600
Asp Asp Met Leu His	Phe Leu Asn Pro Glu Glu Leu Arg Val Ile	
605	610	615

Glu	Glu	Ile	Pro	Gln	Ala	Glu	Asp	Lys	Leu	Asp	Arg	Leu	Phe	Glu
				620					625					630
Ile	Ile	Gly	Val	Lys	Ser	Gln	Glu	Ala	Ser	Gln	Thr	Leu	Leu	Asp
				635					640					645
Ser	Val	Tyr	Ser	His	Leu	Pro	Asp	Leu	Leu					
				650					655					

<210> 65  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 65  
 gtagcagtgc acatggggtg ttgg 24

<210> 66  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 66  
 accgcacatc ctcagtctct gtcc 24

<210> 67  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 67  
 acgatgatcg cgggctccct tctcctgctt ggattcctta gcaccaccac 50

<210> 68  
 <211> 2412  
 <212> DNA  
 <213> Homo sapiens

<400> 68  
 atgggaagcc agtaacactg tggcctacta tctcttccgt ggtgccatct 50  
 acatttttgg gactcgggaa ttatgaggtg gaggtggagg cggagccgga 100  
 tgtcagaggt cctgaaatag tcacatggg ggaaaatgat cgcctgctg 150  
 ttgaagcccc cttctcattc cgatcgcttt ttggccttga tgatttgaaa 200  
 ataagtctg ttgcaccaga tgcagatgct gttgctgcac agatcctgtc 250

actgctgcca ttgaagtttt ttccaatcat cgtcattggg atcattgcat 300  
 tgatattagc actggccatt ggtctgggca tccacttcga ctgctcaggg 350  
 aagtacagat gtcgctcatc ctttaagtgt atcgagctga tagctcgatg 400  
 tgacggagtc tcggattgca aagacgggga ggacgagtac cgctgtgtcc 450  
 ggggtgggtgg tcagaatgcc gtgctccagg tgttcacagc tgcttcgtgg 500  
 aagaccatgt gctccgatga ctggaagggt cactacgcaa atgttgctg 550  
 tgcccaactg ggtttcccaa gctatgtgag ttccagataac ctccagagtga 600  
 gctcgctgga ggggcagttc cgggaggagt ttgtgtccat cgatcacctc 650  
 ttgccagatg acaagggtgac tgcattacac cactcagtat atgtgaggga 700  
 gggatgtgcc tctggccacg tggttacctt gcagtgcaca gcctgtggtc 750  
 atagaagggg ctacagctca cgcacgtgg gtggaacat gtccttgctc 800  
 tcgcagtggc cctggcaggc cagccttcag ttccagggct accacctgtg 850  
 cgggggctct gtcacacgc ccctgtggat catcactgct gcacactgtg 900  
 tttatgactt gtacctccc aagtcatgga ccatccaggt gggctctagtt 950  
 tccctgttgg acaatccagc cccatccac ttggtggaga agattgtcta 1000  
 ccacagcaag tacaagccaa agaggctggg caatgacatc gcccttatga 1050  
 agctggccgg gccactcac ttcaatgaaa tgatccagcc tgtgtgcctg 1100  
 cccaactctg aagagaactt cccgatgga aaagtgtgct ggacgtcagg 1150  
 atggggggcc acagaggatg gaggtgacgc ctcccctgtc ctgaaccacg 1200  
 cggcogtccc tttgatttcc aacaagatct gcaaccacag ggacgtgtac 1250  
 ggtggcatca tctccccctc catgctctgc gcgggctacc tgacgggtgg 1300  
 cgtggacagc tgccaggggg acagcggggg gcccctggtg tgtcaagaga 1350  
 ggaggctgtg gaagttagtg ggagcgacca gctttggcat cggctgcgca 1400  
 gaggtgaaca agcctggggg gtacaccctg gtcacctcct tcctggactg 1450  
 gatccacgag cagatggaga gagacctaaa aacctgaaga ggaaggggac 1500  
 aagtagccac ctgagttcct gaggtgatga agacagccc atcctcccct 1550  
 ggactcccgt gtaggaacct gcacacgagc agacaccctt ggagctctga 1600  
 gttccggcac cagtagcagg cccgaaagag gcacccttcc atctgattcc 1650  
 agcacaacct tcaagctgct ttttgTTTTT tgtttttttg aggtggagtc 1700

tcgctctgtt gccaggtg gagtgcagt gcgaaatccc tgctcactgc 1750  
 agcctccgct tccctggttc aagcgattct cttgcctcag cttccccagt 1800  
 agctgggacc acaggtgccc gccaccacac ccaactaatt tttgtatttt 1850  
 tagtagagac agggtttcac catgttggcc aggtgctct caaaccctg 1900  
 acctcaaag atgtgcctgc ttcagcctcc cacagtgcgt ggattacagg 1950  
 catgggccac cagcctagc ctcacgctcc tttctgatct tctaagaa 2000  
 caaagaagc agcaactg aaggcggcc tttccactg gtccatctgg 2050  
 tttctctcc aggtcttg aaaattcctg acgagataag cagttatgtg 2100  
 acctcacgtg caaagccacc aacagccact cagaaaagac gcaccagccc 2150  
 agaagtgcag aactgcagtc actgcacgtt ttcattctta gggaccagaa 2200  
 ccaaacccac ctttctact tccaagactt attttcacat gtggggaggt 2250  
 taatctagga atgactcgtt taaggcctat tttcatgatt tctttgtagc 2300  
 atttggtgct tgacgtatta ttgtccttg attccaaata atatgtttcc 2350  
 ttccctcatt gtctggcgtg tctgcgtgga ctggtgacgt gaatcaaat 2400  
 catccactga aa 2412

<210> 69

<211> 453

<212> PRT

<213> Homo sapiens

<400> 69

Met	Gly	Glu	Asn	Asp	Pro	Pro	Ala	Val	Glu	Ala	Pro	Phe	Ser	Phe	1	5	10	15
Arg	Ser	Leu	Phe	Gly	Leu	Asp	Asp	Leu	Lys	Ile	Ser	Pro	Val	Ala	20	25	30	
Pro	Asp	Ala	Asp	Ala	Val	Ala	Ala	Gln	Ile	Leu	Ser	Leu	Leu	Pro	35	40	45	
Leu	Lys	Phe	Phe	Pro	Ile	Ile	Val	Ile	Gly	Ile	Ile	Ala	Leu	Ile	50	55	60	
Leu	Ala	Leu	Ala	Ile	Gly	Leu	Gly	Ile	His	Phe	Asp	Cys	Ser	Gly	65	70	75	
Lys	Tyr	Arg	Cys	Arg	Ser	Ser	Phe	Lys	Cys	Ile	Glu	Leu	Ile	Ala	80	85	90	
Arg	Cys	Asp	Gly	Val	Ser	Asp	Cys	Lys	Asp	Gly	Glu	Asp	Glu	Tyr	95	100	105	
Arg	Cys	Val	Arg	Val	Gly	Gly	Gln	Asn	Ala	Val	Leu	Gln	Val	Phe				

110										115					120				
Thr	Ala	Ala	Ser	Trp	Lys	Thr	Met	Cys	Ser	Asp	Asp	Trp	Lys	Gly					
				125					130					135					
His	Tyr	Ala	Asn	Val	Ala	Cys	Ala	Gln	Leu	Gly	Phe	Pro	Ser	Tyr					
				140					145					150					
Val	Ser	Ser	Asp	Asn	Leu	Arg	Val	Ser	Ser	Leu	Glu	Gly	Gln	Phe					
				155					160					165					
Arg	Glu	Glu	Phe	Val	Ser	Ile	Asp	His	Leu	Leu	Pro	Asp	Asp	Lys					
				170					175					180					
Val	Thr	Ala	Leu	His	His	Ser	Val	Tyr	Val	Arg	Glu	Gly	Cys	Ala					
				185					190					195					
Ser	Gly	His	Val	Val	Thr	Leu	Gln	Cys	Thr	Ala	Cys	Gly	His	Arg					
				200					205					210					
Arg	Gly	Tyr	Ser	Ser	Arg	Ile	Val	Gly	Gly	Asn	Met	Ser	Leu	Leu					
				215					220					225					
Ser	Gln	Trp	Pro	Trp	Gln	Ala	Ser	Leu	Gln	Phe	Gln	Gly	Tyr	His					
				230					235					240					
Leu	Cys	Gly	Gly	Ser	Val	Ile	Thr	Pro	Leu	Trp	Ile	Ile	Thr	Ala					
				245					250					255					
Ala	His	Cys	Val	Tyr	Asp	Leu	Tyr	Leu	Pro	Lys	Ser	Trp	Thr	Ile					
				260					265					270					
Gln	Val	Gly	Leu	Val	Ser	Leu	Leu	Asp	Asn	Pro	Ala	Pro	Ser	His					
				275					280					285					
Leu	Val	Glu	Lys	Ile	Val	Tyr	His	Ser	Lys	Tyr	Lys	Pro	Lys	Arg					
				290					295					300					
Leu	Gly	Asn	Asp	Ile	Ala	Leu	Met	Lys	Leu	Ala	Gly	Pro	Leu	Thr					
				305					310					315					
Phe	Asn	Glu	Met	Ile	Gln	Pro	Val	Cys	Leu	Pro	Asn	Ser	Glu	Glu					
				320					325					330					
Asn	Phe	Pro	Asp	Gly	Lys	Val	Cys	Trp	Thr	Ser	Gly	Trp	Gly	Ala					
				335					340					345					
Thr	Glu	Asp	Gly	Gly	Asp	Ala	Ser	Pro	Val	Leu	Asn	His	Ala	Ala					
				350					355					360					
Val	Pro	Leu	Ile	Ser	Asn	Lys	Ile	Cys	Asn	His	Arg	Asp	Val	Tyr					
				365					370					375					
Gly	Gly	Ile	Ile	Ser	Pro	Ser	Met	Leu	Cys	Ala	Gly	Tyr	Leu	Thr					
				380					385					390					
Gly	Gly	Val	Asp	Ser	Cys	Gln	Gly	Asp	Ser	Gly	Gly	Pro	Leu	Val					
				395					400					405					



Cys	Gln	Glu	Arg	Arg	Leu	Trp	Lys	Leu	Val	Gly	Ala	Thr	Ser	Phe
				410					415					420
Gly	Ile	Gly	Cys	Ala	Glu	Val	Asn	Lys	Pro	Gly	Val	Tyr	Thr	Arg
				425					430					435
Val	Thr	Ser	Phe	Leu	Asp	Trp	Ile	His	Glu	Gln	Met	Glu	Arg	Asp
				440					445					450

Leu Lys Thr

<210> 70

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 70

tgacatcgcc cttatgaagc tggc 24

<210> 71

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 71

tacacgtccc tgtggttgca gatc 24

<210> 72

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 72

cgttcaatgc agaaatgatc cagcctgtgt gcctgcccaa ctctgaagag 50

<210> 73

<211> 3305

<212> DNA

<213> Homo sapiens

<400> 73

cccacgcgtc cgtcctagtc cccgggccaa ctcgacagc ttgctcattt 50

attgcaacgg tcaaggctgg cttgtgccag aacggcgcg gcgcgcgcac 100

gcacgcacac acacgggggg aaactttttt aaaaatgaaa ggctagaaga 150

gctcagcggc ggcgcggggc ctgcgcgagg gctccggagc tgactcgccg 200

aggcaggaaa tccctccggt cgcgacgccc ggccccgggt cggcgccccg 250  
 gtgggatggt gcagcgctcg ccgcccggcc cgagagctgc tgcactgaag 300  
 gccggcgacg atggcagcgc gcccgtgcc cgtgtccccg gcccgcgccc 350  
 tcctgctcgc cctggccggt gctctgctcg cgccctgcga ggcccgaggg 400  
 gtgagcttat ggaaccaagg aagagctgat gaagttgtca gtgcctctgt 450  
 tcggagtggg gacctctgga tcccagtga gagcttogac tccaagaatc 500  
 atccagaagt gctgaatatt cgactacaac gggaaagcaa agaactgac 550  
 ataaatctgg aaagaaatga aggtctcatt gccagcagtt tcacggaaac 600  
 ccactatctg caagacggta ctgatgtctc cctcgctcga aattacacgg 650  
 gtcactgtta ctacatgga catgtacggg gatattctga ttcagcagtc 700  
 agtctcagca cgtgttctgg tctcagggga cttatttgtt ttgaaaatga 750  
 aagctatgtc ttagaaccaa tgaaaagtgc aaccaacaga taaaactct 800  
 tcccagcgaa gaagctgaaa agcgtccggg gatcatgtgg atcacatcac 850  
 aacacaccaa acctcgctgc aaagaatgtg tttccaccac cctctcagac 900  
 atgggcaaga aggcataaaa gagagaccct caaggcaact aagtatgtgg 950  
 agctggtgat cgtggcagac aaccgagagt ttcagaggca aggaaaagat 1000  
 ctggaaaaag ttaagcagcg attaatagag attgctaata acgttgacaa 1050  
 gttttacaga ccactgaaca ttcggatcgt gttggtaggc gtggaagtgt 1100  
 ggaatgacat ggacaaatgc tctgtaagtc aggaccatt caccagcctc 1150  
 catgaatttc tggactggag gaagatgaag cttctacctc gcaaatccca 1200  
 tgacaatgcg cagcttgtca gtgggggtta tttccaaggg accaccatcg 1250  
 gcatggcccc aatcatgagc atgtgcacgg cagaccagtc tgggggaatt 1300  
 gtcatggacc attcagacaa tccccttggg gcagccgtga ccctggcaca 1350  
 tgagctgggc cacaatttcg ggatgaatca tgacacactg gacaggggct 1400  
 gtagctgtca aatggcggtt gagaaaggag gctgcatcat gaacgcttcc 1450  
 accgggtacc catttcccat ggtgttcagc agttgcagca ggaaggactt 1500  
 ggagaccagc ctggagaaaag gaatgggggt gtgcctgttt aacctgccgg 1550  
 aagtcaggga gtctttcggg ggccagaagt gtgggaacag atttgtggaa 1600  
 gaaggagagg agtgtgactg tggggagcca gaggaatgta tgaatcgctg 1650

ctgcaatgcc accacctgta cctgaagcc ggacgctgtg tgcgcacatg 1700  
 ggctgtgctg tgaagactgc cagctgaagc ctgcaggaac agcgtgcagg 1750  
 gactccagca actcctgtga cctcccagag ttctgcacag gggccagccc 1800  
 tcaactgccc gccaatgtgt acctgcacga tgggcactca tgtcaggatg 1850  
 tggacggcta ctgctacaat ggcactgcc agactcacga gcagcagtgt 1900  
 gtcacgctct ggggaccagg tgctaaacct gccctggga tctgctttga 1950  
 gagagtcaat tctgcagggtg atccttatgg caactgtggc aaagtctcga 2000  
 agagttcctt tgccaaatgc gagatgagag atgctaaatg tggaaaaatc 2050  
 cagtgtcaag gaggtgccag ccggccagtc attggtacca atgccgtttc 2100  
 catagaaaca aacatccctc tgcagcaagg aggccggatt ctgtgccggg 2150  
 ggaccacagt gtacttgggc gatgacatgc cggaccacagg gcttgtgctt 2200  
 gcaggcacia agtgtgcaga tggaaaaatc tgcctgaatc gtcaatgtca 2250  
 aaatattagt gtctttggg ttcacgagtg tgcaatgcag tgccacggca 2300  
 gaggggtgtg caacaacagg aagaactgcc actgcgaggc ccaactgggca 2350  
 cctcccttct gtgacaagtt tggctttgga ggaagcacag acagcggccc 2400  
 catccggcaa gcagaagcaa ggcaggaagc tgcagagtcc aacaggggagc 2450  
 gcggccaggg ccaggagccc gtgggatcgc aggagcatgc gtctactgcc 2500  
 tcaactgacac tcatctgagc cctcccatga catggagacc gtgaccagtg 2550  
 ctgctgcaga ggaggtcacg cgtccccaag gcctcctgtg actggcagca 2600  
 ttgactctgt ggctttgcca tcgtttccat gacaacagac acaacacagt 2650  
 tctcggggct caggagggga agtccagcct accaggcacg tctgcagaaa 2700  
 cagtgcaggg aagggcagcg acttcctggt tgagcttctg ctaaaacatg 2750  
 gacatgcttc agtgctgctc ctgagagagt agcaggttac cactctggca 2800  
 ggcccagccc ctgcagcaag gaggaagagg actcaaaagt ctggcctttc 2850  
 actgagcctc cacagcagtg ggggagaagc aagggttggg ccagtggtcc 2900  
 cctttcccca gtgacacctc agccttggca gccctgatga ctggtctctg 2950  
 gctgcaactt aatgctctga tatggctttt agcatttatt atatgaaaat 3000  
 agcagggttt tagtttttaa ttatcagag accctgccac ccattccatc 3050  
 tccatccaag caaactgaat ggcaatgaaa caaactggag aagaaggtag 3100

gagaaagggc ggtgaactct ggctctttgc tgtggacatg cgtgaccagc 3150  
 agtactcagg tttgaggggtt tgcagaaagc caggggaaccc acagagtcac 3200  
 caacccttca tttaacaagt aagaatgtta aaaagtgaaa acaatgtaag 3250  
 agcctaactc catcccccggt ggccattact gcataaaata gagtgcattt 3300  
 gaaat 3305

<210> 74  
 <211> 735  
 <212> PRT  
 <213> Homo sapiens

<400> 74  
 Met Ala Ala Arg Pro Leu Pro Val Ser Pro Ala Arg Ala Leu Leu  
 1 5 10 15  
 Leu Ala Leu Ala Gly Ala Leu Leu Ala Pro Cys Glu Ala Arg Gly  
 20 25 30  
 Val Ser Leu Trp Asn Gln Gly Arg Ala Asp Glu Val Val Ser Ala  
 35 40 45  
 Ser Val Arg Ser Gly Asp Leu Trp Ile Pro Val Lys Ser Phe Asp  
 50 55 60  
 Ser Lys Asn His Pro Glu Val Leu Asn Ile Arg Leu Gln Arg Glu  
 65 70 75  
 Ser Lys Glu Leu Ile Ile Asn Leu Glu Arg Asn Glu Gly Leu Ile  
 80 85 90  
 Ala Ser Ser Phe Thr Glu Thr His Tyr Leu Gln Asp Gly Thr Asp  
 95 100 105  
 Val Ser Leu Ala Arg Asn Tyr Thr Gly His Cys Tyr Tyr His Gly  
 110 115 120  
 His Val Arg Gly Tyr Ser Asp Ser Ala Val Ser Leu Ser Thr Cys  
 125 130 135  
 Ser Gly Leu Arg Gly Leu Ile Val Phe Glu Asn Glu Ser Tyr Val  
 140 145 150  
 Leu Glu Pro Met Lys Ser Ala Thr Asn Arg Tyr Lys Leu Phe Pro  
 155 160 165  
 Ala Lys Lys Leu Lys Ser Val Arg Gly Ser Cys Gly Ser His His  
 170 175 180  
 Asn Thr Pro Asn Leu Ala Ala Lys Asn Val Phe Pro Pro Pro Ser  
 185 190 195  
 Gln Thr Trp Ala Arg Arg His Lys Arg Glu Thr Leu Lys Ala Thr  
 200 205 210

Lys Tyr Val Glu Leu Val Ile Val Ala Asp Asn Arg Glu Phe Gln	215	220	225
Arg Gln Gly Lys Asp Leu Glu Lys Val Lys Gln Arg Leu Ile Glu	230	235	240
Ile Ala Asn His Val Asp Lys Phe Tyr Arg Pro Leu Asn Ile Arg	245	250	255
Ile Val Leu Val Gly Val Glu Val Trp Asn Asp Met Asp Lys Cys	260	265	270
Ser Val Ser Gln Asp Pro Phe Thr Ser Leu His Glu Phe Leu Asp	275	280	285
Trp Arg Lys Met Lys Leu Leu Pro Arg Lys Ser His Asp Asn Ala	290	295	300
Gln Leu Val Ser Gly Val Tyr Phe Gln Gly Thr Thr Ile Gly Met	305	310	315
Ala Pro Ile Met Ser Met Cys Thr Ala Asp Gln Ser Gly Gly Ile	320	325	330
Val Met Asp His Ser Asp Asn Pro Leu Gly Ala Ala Val Thr Leu	335	340	345
Ala His Glu Leu Gly His Asn Phe Gly Met Asn His Asp Thr Leu	350	355	360
Asp Arg Gly Cys Ser Cys Gln Met Ala Val Glu Lys Gly Gly Cys	365	370	375
Ile Met Asn Ala Ser Thr Gly Tyr Pro Phe Pro Met Val Phe Ser	380	385	390
Ser Cys Ser Arg Lys Asp Leu Glu Thr Ser Leu Glu Lys Gly Met	395	400	405
Gly Val Cys Leu Phe Asn Leu Pro Glu Val Arg Glu Ser Phe Gly	410	415	420
Gly Gln Lys Cys Gly Asn Arg Phe Val Glu Glu Gly Glu Glu Cys	425	430	435
Asp Cys Gly Glu Pro Glu Glu Cys Met Asn Arg Cys Cys Asn Ala	440	445	450
Thr Thr Cys Thr Leu Lys Pro Asp Ala Val Cys Ala His Gly Leu	455	460	465
Cys Cys Glu Asp Cys Gln Leu Lys Pro Ala Gly Thr Ala Cys Arg	470	475	480
Asp Ser Ser Asn Ser Cys Asp Leu Pro Glu Phe Cys Thr Gly Ala	485	490	495
Ser Pro His Cys Pro Ala Asn Val Tyr Leu His Asp Gly His Ser			

500	505	510
Cys Gln Asp Val Asp Gly Tyr Cys Tyr	Asn Gly Ile Cys Gln Thr	
515	520	525
His Glu Gln Gln Cys Val Thr Leu Trp	Gly Pro Gly Ala Lys Pro	
530	535	540
Ala Pro Gly Ile Cys Phe Glu Arg Val	Asn Ser Ala Gly Asp Pro	
545	550	555
Tyr Gly Asn Cys Gly Lys Val Ser Lys	Ser Ser Phe Ala Lys Cys	
560	565	570
Glu Met Arg Asp Ala Lys Cys Gly Lys	Ile Gln Cys Gln Gly Gly	
575	580	585
Ala Ser Arg Pro Val Ile Gly Thr Asn	Ala Val Ser Ile Glu Thr	
590	595	600
Asn Ile Pro Leu Gln Gln Gly Gly Arg	Ile Leu Cys Arg Gly Thr	
605	610	615
His Val Tyr Leu Gly Asp Asp Met Pro	Asp Pro Gly Leu Val Leu	
620	625	630
Ala Gly Thr Lys Cys Ala Asp Gly Lys	Ile Cys Leu Asn Arg Gln	
635	640	645
Cys Gln Asn Ile Ser Val Phe Gly Val	His Glu Cys Ala Met Gln	
650	655	660
Cys His Gly Arg Gly Val Cys Asn Asn	Arg Lys Asn Cys His Cys	
665	670	675
Glu Ala His Trp Ala Pro Pro Phe Cys	Asp Lys Phe Gly Phe Gly	
680	685	690
Gly Ser Thr Asp Ser Gly Pro Ile Arg	Gln Ala Glu Ala Arg Gln	
695	700	705
Glu Ala Ala Glu Ser Asn Arg Glu Arg	Gly Gln Gly Gln Glu Pro	
710	715	720
Val Gly Ser Gln Glu His Ala Ser Thr	Ala Ser Leu Thr Leu Ile	
725	730	735

<210> 75

<211> 483

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 94, 143, 156, 163, 179, 193, 369, 371, 381, 390, 473

<223> unknown base

<400> 75

tcccaaggct tcttgatgg cagatgattn tggggttttg cattgtttcc 50  
 ctgacaacga aaacaaaaca gttttggggg ttcaggaggg gaantccagc 100  
 ctaccaggga agtttgcaga aacagtgcaa ggaagggcag ganttcctgg 150  
 ttgagntttt tgntaaaaca tggacatgnt tcagtgtgc tcntgagaga 200  
 gtagcagggtt accacttttg gcaggcccca gccctgcagc aaggaggaag 250  
 aggactcaaa agtttggcct ttcactgagc ctccacagca gtgggggaga 300  
 agcaagggtt gggcccagtg tcccctttcc ccagtgcac ctcagccttg 350  
 gcagccctga taactggtn ntggctgcaa nttaatgctn tgatatggct 400  
 tttagcattt attatatgaa aatagcaggg ttttagtttt taatttatca 450  
 gagaccctgc caccattcc atntccatcc aag 483

<210> 76

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 76

gtctcagcac gtgttctggt ctcagg 27

<210> 77

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 77

catgagcatg tgcacggc 18

<210> 78

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 78

tacctgcacg atgggcac 18

<210> 79

<211> 18

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 79  
cactgggcac ctcccttc 18

<210> 80  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 80  
ctccaggctg gtctccaagt ccttcc 26

<210> 81  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 81  
tccctgttg actctgcagc ttcc 24

<210> 82  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 82  
cttcgctggg aagagtttg 19

<210> 83  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 83  
gtgcaaccaa cagatacaaa ctcttcccag cgaagaagct gaaaagcgtc 50

<210> 84  
<211> 1714  
<212> DNA  
<213> Homo sapiens

<400> 84  
catcctgcaa catggtgaaa ccacgcctgg ctaattttgt tgtatttttg 50



gtagagatgg gatttcaccg tgttagccag gattgtctca atotgacctc 100  
 atgatctgcc cgctcggcc tcccaaagtg ctgggattac aggcgagtgc 150  
 aaccacaccc ggccacaaac tttttaagaa gttaatgaaa ccataccttt 200  
 tacattttta atgacaggaa aatgctcaca ataattgtta acccaaaatt 250  
 ctggatacaa aagtacaatc tttactgtgt aaatacatgt atatgtacta 300  
 tatgaaaata taccaaatat caataatact tatctctggg taaaaacctc 350  
 ttctcatacc ctgtgctaac aacttttaac aaaaaatttg catcactttt 400  
 aagaatcaag aaaaatttct gaaggtcata tgggacagaa aaaaaacca 450  
 agggaaaaat cacgccactt gggaaaaaaa gattcgaaat ctgccttttt 500  
 atagatttgt aattaataag gtccaggctt tctaagcaac ttaaatgttt 550  
 tgtttcgaaa caaagtactt gtctggatgt aggaggaaaag ggagtgatgt 600  
 cactgccatt atgatgcccc ttgaatataa gacctactt gctatctccc 650  
 ctgcaccagc caggagccac ccatcctcca gcacactgag cagcaagctg 700  
 gacacacggc aactgatcc aaatgggtaa ggggatggtg gcgatgctca 750  
 ttctgggtct gctacttctg gcgctgctcc taccctgca ggtttcttca 800  
 tttgttcctt taaccagtat gccggaagct actgcagccg aaaccacaaa 850  
 gccctccaac agtgccttac agcctacagc cggctctcctt gtggtcttgc 900  
 ttgcccttct acatctctac cattaagagg caggtcaaga aacagctaca 950  
 gtctctcaac ccatacacta aaaccgaatc caaatggtgc ctagaagttc 1000  
 aatgtggcaa ggaaaaaac caggtcttca tcaaacttac taatttact 1050  
 ccttattaac agagaaacgc ttgagagtct caaactggac tggtttaaag 1100  
 agcatctgaa ggatttgact agatgataaa tgcctgtact ccagtgactt 1150  
 tgggaggcct aggcggcgg atcacctgag gtcaggagt ttgagactaac 1200  
 ctggccaaaa tggtgaaacc ccatctgtac taaaaatata aatattgact 1250  
 gggcgtggtg gtgagtgcct gtgatccag ctactcaggt ggctgaagca 1300  
 ggacaatcac ttgaactcag gaggcagagg ttgcagtga ctgagatcgc 1350  
 gctactgcac tctagcctag cctgggcaac agagtgagac ttcgtctcaa 1400  
 aaaaaaaaaa gccaaagtga gtggctcacg cctgtaatcc cggcactttg 1450  
 ggaggccgag gtgggaggat cagcaggtca ggagatcaag accatcctgg 1500

ctaatacagt gaaaccctgt ctctactaaa aatacaaaaa attagccggg 1550  
gatggtggca ggcacctgga gtcccagcta ctcgaggaggc tgaggcagga 1600  
gaatagcgtg aactcaggag gcggagcttg cagtgagccg agattgogct 1650  
actgcactcc agcctgggag acagcgcgag actccgtctc aaaaaaaaaa 1700  
aaaaaaaaaa aaaa 1714

<210> 85  
<211> 67  
<212> PRT  
<213> Homo sapiens

<400> 85  
Met Gly Lys Gly Met Val Ala Met Leu Ile Leu Gly Leu Leu Leu  
1 5 10 15  
Leu Ala Leu Leu Leu Pro Val Gln Val Ser Ser Phe Val Pro Leu  
20 25 30  
Thr Ser Met Pro Glu Ala Thr Ala Ala Glu Thr Thr Lys Pro Ser  
35 40 45  
Asn Ser Ala Leu Gln Pro Thr Ala Gly Leu Leu Val Val Leu Leu  
50 55 60  
Ala Leu Leu His Leu Tyr His  
65

<210> 86  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 86  
acgggcacac tggatcccaa atg 23

<210> 87  
<211> 29  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 87  
ggtagagatg tagaagggca agcaagacc 29

<210> 88  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 88

gctccctacc cgtgcaggtt tcttcatttg ttcctttaac cagtatgccg 50

<210> 89

<211> 2956

<212> DNA

<213> Homo sapiens

<400> 89

gccgcggcga gagcgcgccc agccccgccg cgatgcccg gcgcccagga 50  
cgctcctcc cgctgctggc ccggccggcg gccctgactg cgctgctgct 100  
gctgctgctg ggccatggcg gcggcgggcg ctggggcgcc cgggcccagg 150  
aggcggcggc ggccggcggc gacgggcccc ccgcggcaga cggcgaggac 200  
ggacaggacc cgcacagcaa gcacctgtac acggccgaca tgttcacgca 250  
cgggatccag agcgcgcgcg acttcgtcat gttcttcgcg ccctggtgtg 300  
gacactgcca gcggctgcag ccgacttgga atgacctggg agacaaatac 350  
aacagcatgg aagatgcaa agtctatgtg gctaaagtgg actgcacggc 400  
ccactccgac gtgtgctccg ccaggggggt gcgaggatac cccaccttaa 450  
agcttttcaa gccaggcaa gaagctgtga agtaccaggg tcctcgggac 500  
ttcagacac tggaaaactg gatgctgcag aactgaacg aggagccagt 550  
gacaccagag ccggaagtgg aaccgccag tgcccccgag ctcaagcaag 600  
ggctgtatga gctctcagca agcaactttg agctgcacgt tgcacaaggc 650  
gaccaactta tcaagttctt cgctccgtgg tgtggtcact gcaaagccct 700  
ggctccaacc tgggagcagc tggctctggg ccttgaacat tccgaaactg 750  
tcaagattgg caaggttgat tgtacacagc actatgaact ctgctccgga 800  
aaccaggttc gtggctatcc cactcttctc tggttccgag atgggaaaaa 850  
ggtagatcag tacaaggga agcgggattt ggagtcactg agggagtacg 900  
tgagtcgca gctgcagcgc acagagactg gagcgacgga gaccgtcacg 950  
ccctcagagg ccccggtgct ggcagctgag cccgaggctg acaagggcac 1000  
tgtgttgga ctcactgaaa ataacttcga tgacaccatt gcagaaggaa 1050  
taaccttcat caagttttat gctccatggt gtggtcattg taagactctg 1100  
gtcctactt gggaggaact ctctaaaaag gaattccctg gtctggcggg 1150

ggtcaagatc gccgaagtag actgcactgc tgaacggaat atctgcagca 1200  
 agtattcggg acgaggctac cccacgttat tgcttttccg aggagggaag 1250  
 aaagtcagtg agcacagtgg aggagagac cttgactcgt tacaccgctt 1300  
 tgtcctgagc caagcgaaag acgaacttta ggaacacagt tggaggtcac 1350  
 ctctcctgcc cagctcccgc accctgcgtt taggagttca gtcccacaga 1400  
 ggccactggg ttcccagtgg tggctgttca gaaagcagaa cataactaagc 1450  
 gtgagggtatc ttctttgtgt gtgtgttttc caagccaaca cactctacag 1500  
 attctttatt aagttaagtt tctctaagta aatgtgtaac tcatggtcac 1550  
 tgtgtaaaca ttttcagtgg cgatatatcc cctttgacct tctcttgatg 1600  
 aaatttacat ggtttccttt gagactaaaa tagcgttgag ggaaatgaaa 1650  
 ttgctggact atttgtggct cctgagttga gtgattttgg tgaaagaaa 1700  
 cacatccaaa gcatagttta cctgcccacg agttctggaa aggtggcctt 1750  
 gtggcagtat tgacgttcct ctgatcttaa ggtcacagt gactcaatac 1800  
 tgtgttggtc cgtagcatgg agcagattga aatgcaaaaa cccacacctc 1850  
 tggaagatac cttcacggcc gctgctggag cttctgttgc tgtgaatact 1900  
 tctctcagtg tgagaggtta gccgtgatga aagcagcgtt acttctgacc 1950  
 gtgcctgagt aagagaatgc tgatgccata actttatgtg tcgatacttg 2000  
 tcaaatacagt tactgttcag gggatccttc tgtttctcac ggggtgaaac 2050  
 atgtcttttag ttctcatgt taacacgaag ccagagccca catgaactgt 2100  
 tggatgtctt ccttagaaaag ggtaggcatg gaaaattcca cgaggctcat 2150  
 tctcagtatc tcattaactc attgaaagat tccagttgta tttgtcacct 2200  
 ggggtgacaa gaccagacag gctttccag gcctgggtat ccagggaggc 2250  
 tctgcagccc tgctgaaggg cctaactag agttctagag tttctgattc 2300  
 tgtttctcag tagtcctttt agaggcttgc tatacttggg ctgcttcaag 2350  
 gaggtogacc ttctaagtga tgaagaatgg gatgcatttg atctcaagac 2400  
 caaagacaga tgtcagtggg ctgctctggc cctggtgtgc acggctgtgg 2450  
 cagctgttga tgccagtgtc ctctaactca tgctgtcctt gtgattaaac 2500  
 acctctatct cccttgggaa taagcacata caggcttaag ctctaagata 2550  
 gatagggtgtt tgtcctttta ccacagagct acttcccata ataaccactt 2600

tgcacccaac actcttcacc cacctcccat acgcaagggg atgtggatac 2650  
 ttggcccaaa gtaactggtg gtaggaatct tagaaacaag accacttata 2700  
 ctgtctgtct gaggcagaag ataacagcag catctogacc agcctctgcc 2750  
 ttaaaggaaa tctttattaa tcacgtatgg ttcacagata attctttttt 2800  
 taaaaaaacc caacctccta gagaagcaca actgtcaaga gtcttgtaga 2850  
 cacaacttca gctttgcatc acgagtcttg tattccaaga aaatcaaagt 2900  
 ggtacaattt gtttggttac actatgatac tttctaaata aactcttttt 2950  
 ttttaa 2956

<210> 90

<211> 432

<212> PRT

<213> Homo sapiens

<400> 90

Met	Pro	Ala	Arg	Pro	Gly	Arg	Leu	Leu	Pro	Leu	Leu	Ala	Arg	Pro	1	5	10	15
Ala	Ala	Leu	Thr	Ala	Leu	Leu	Leu	Leu	Leu	Gly	His	Gly	Gly		20	25	30	
Gly	Gly	Arg	Trp	Gly	Ala	Arg	Ala	Gln	Glu	Ala	Ala	Ala	Ala	Ala	35	40	45	
Ala	Asp	Gly	Pro	Pro	Ala	Ala	Asp	Gly	Glu	Asp	Gly	Gln	Asp	Pro	50	55	60	
His	Ser	Lys	His	Leu	Tyr	Thr	Ala	Asp	Met	Phe	Thr	His	Gly	Ile	65	70	75	
Gln	Ser	Ala	Ala	His	Phe	Val	Met	Phe	Phe	Ala	Pro	Trp	Cys	Gly	80	85	90	
His	Cys	Gln	Arg	Leu	Gln	Pro	Thr	Trp	Asn	Asp	Leu	Gly	Asp	Lys	95	100	105	
Tyr	Asn	Ser	Met	Glu	Asp	Ala	Lys	Val	Tyr	Val	Ala	Lys	Val	Asp	110	115	120	
Cys	Thr	Ala	His	Ser	Asp	Val	Cys	Ser	Ala	Gln	Gly	Val	Arg	Gly	125	130	135	
Tyr	Pro	Thr	Leu	Lys	Leu	Phe	Lys	Pro	Gly	Gln	Glu	Ala	Val	Lys	140	145	150	
Tyr	Gln	Gly	Pro	Arg	Asp	Phe	Gln	Thr	Leu	Glu	Asn	Trp	Met	Leu	155	160	165	
Gln	Thr	Leu	Asn	Glu	Glu	Pro	Val	Thr	Pro	Glu	Pro	Glu	Val	Glu	170	175	180	

Pro	Pro	Ser	Ala	Pro	Glu	Leu	Lys	Gln	Gly	Leu	Tyr	Glu	Leu	Ser	185	190	195
Ala	Ser	Asn	Phe	Glu	Leu	His	Val	Ala	Gln	Gly	Asp	His	Phe	Ile	200	205	210
Lys	Phe	Phe	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Ala	Leu	Ala	Pro	215	220	225
Thr	Trp	Glu	Gln	Leu	Ala	Leu	Gly	Leu	Glu	His	Ser	Glu	Thr	Val	230	235	240
Lys	Ile	Gly	Lys	Val	Asp	Cys	Thr	Gln	His	Tyr	Glu	Leu	Cys	Ser	245	250	255
Gly	Asn	Gln	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Trp	Phe	Arg	Asp	260	265	270
Gly	Lys	Lys	Val	Asp	Gln	Tyr	Lys	Gly	Lys	Arg	Asp	Leu	Glu	Ser	275	280	285
Leu	Arg	Glu	Tyr	Val	Glu	Ser	Gln	Leu	Gln	Arg	Thr	Glu	Thr	Gly	290	295	300
Ala	Thr	Glu	Thr	Val	Thr	Pro	Ser	Glu	Ala	Pro	Val	Leu	Ala	Ala	305	310	315
Glu	Pro	Glu	Ala	Asp	Lys	Gly	Thr	Val	Leu	Ala	Leu	Thr	Glu	Asn	320	325	330
Asn	Phe	Asp	Asp	Thr	Ile	Ala	Glu	Gly	Ile	Thr	Phe	Ile	Lys	Phe	335	340	345
Tyr	Ala	Pro	Trp	Cys	Gly	His	Cys	Lys	Thr	Leu	Ala	Pro	Thr	Trp	350	355	360
Glu	Glu	Leu	Ser	Lys	Lys	Glu	Phe	Pro	Gly	Leu	Ala	Gly	Val	Lys	365	370	375
Ile	Ala	Glu	Val	Asp	Cys	Thr	Ala	Glu	Arg	Asn	Ile	Cys	Ser	Lys	380	385	390
Tyr	Ser	Val	Arg	Gly	Tyr	Pro	Thr	Leu	Leu	Leu	Phe	Arg	Gly	Gly	395	400	405
Lys	Lys	Val	Ser	Glu	His	Ser	Gly	Gly	Arg	Asp	Leu	Asp	Ser	Leu	410	415	420
His	Arg	Phe	Val	Leu	Ser	Gln	Ala	Lys	Asp	Glu	Leu				425	430	

<210> 91

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 91  
atgttcttcg cgccctggtg 20

<210> 92  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 92  
ccaagccaac acactctaca g 21

<210> 93  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 93  
aagtggtcgc cttgtgcaac gtgc 24

<210> 94  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 94  
ggtcaaaggg gatatatcgc cac 23

<210> 95  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 95  
gcatggaaga tgccaaagtc tatgtggcta aagtggactg cacggccca 49

<210> 96  
<211> 1016  
<212> DNA  
<213> Homo sapiens

<400> 96  
cttttctgag gaaccacagc aatgaatggc tttgcatcct tgcttcgaag 50  
aaaccaattt atcctcctgg tactatttct tttgcaaatt cagagtctgg 100  
gtctggatat tgatagccgt cctaccgctg aagtctgtgc cacacacaca 150

atttcaccag gacccaaaagg agatgatggt gaaaaaggag atccaggaga 200  
 agaggggaaag catggcaaag tgggacgcat ggggccgaaa ggaattaaag 250  
 gagaactggg tgatatggga gatcagggca atattggcaa gactgggccc 300  
 attgggaaga aggggtgacaa aggggaaaaa ggtttgcttg gaatacctgg 350  
 agaaaaaggc aaagcaggtg ctgtctgtga ttgtggaaga taccggaaat 400  
 ttgttggaaga actggatatt agtattgctc ggctcaagac atctatgaag 450  
 tttgtcaaga atgtgatagc agggattagg gaaactgaag agaaattcta 500  
 ctacatcgtg caggaagaga agaactacag ggaatcccta acccactgca 550  
 ggattcgggg tggaatgcta gccatgcca aggatgaagc tgccaacaca 600  
 ctcatcgctg actatgttgc caagagtggc ttctttcggg tgttcattgg 650  
 cgtgaatgac cttgaaaggg agggacagta catgtccaca gacaacactc 700  
 cactgcagaa ctatagcaac tggaatgagg gggaaccag cgaccctat 750  
 ggtcatgagg actgtgtgga gatgctgagc tctggcagat ggaatgacac 800  
 agagtgccat cttaccatgt actttgtctg tgagttcatc aagaagaaaa 850  
 agtaacttcc ctcatcctac gtatttgcta ttttcctgtg accgtcatta 900  
 cagttattgt tatccatcct ttttttcctg attgtactac atttgatctg 950  
 agtcaacata gctagaaaat gctaaactga ggtatggagc ctccatcatc 1000  
 aaaaaaaaaa aaaaaa 1016

<210> 97

<211> 277

<212> PRT

<213> Homo sapiens

<400> 97

Met	Asn	Gly	Phe	Ala	Ser	Leu	Leu	Arg	Arg	Asn	Gln	Phe	Ile	Leu
1				5					10					15

Leu	Val	Leu	Phe	Leu	Leu	Gln	Ile	Gln	Ser	Leu	Gly	Leu	Asp	Ile
				20					25					30

Asp	Ser	Arg	Pro	Thr	Ala	Glu	Val	Cys	Ala	Thr	His	Thr	Ile	Ser
				35					40					45

Pro	Gly	Pro	Lys	Gly	Asp	Asp	Gly	Glu	Lys	Gly	Asp	Pro	Gly	Glu
				50					55					60

Glu	Gly	Lys	His	Gly	Lys	Val	Gly	Arg	Met	Gly	Pro	Lys	Gly	Ile
				65					70					75

Lys	Gly	Glu	Leu	Gly	Asp	Met	Gly	Asp	Gln	Gly	Asn	Ile	Gly	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----



	80	85	90
Thr Gly Pro Ile	Gly Lys Lys Gly Asp	Lys Gly Glu Lys Gly	Leu
	95	100	105
Leu Gly Ile Pro	Gly Glu Lys Gly Lys	Ala Gly Thr Val Cys	Asp
	110	115	120
Cys Gly Arg Tyr	Arg Lys Phe Val Gly	Gln Leu Asp Ile Ser	Ile
	125	130	135
Ala Arg Leu Lys	Thr Ser Met Lys Phe	Val Lys Asn Val Ile	Ala
	140	145	150
Gly Ile Arg Glu	Thr Glu Glu Lys Phe	Tyr Tyr Ile Val Gln	Glu
	155	160	165
Glu Lys Asn Tyr	Arg Glu Ser Leu Thr	His Cys Arg Ile Arg	Gly
	170	175	180
Gly Met Leu Ala	Met Pro Lys Asp Glu	Ala Ala Asn Thr Leu	Ile
	185	190	195
Ala Asp Tyr Val	Ala Lys Ser Gly Phe	Phe Arg Val Phe Ile	Gly
	200	205	210
Val Asn Asp Leu	Glu Arg Glu Gly Gln	Tyr Met Ser Thr Asp	Asn
	215	220	225
Thr Pro Leu Gln	Asn Tyr Ser Asn Trp	Asn Glu Gly Glu Pro	Ser
	230	235	240
Asp Pro Tyr Gly	His Glu Asp Cys Val	Glu Met Leu Ser Ser	Gly
	245	250	255
Arg Trp Asn Asp	Thr Glu Cys His Leu	Thr Met Tyr Phe Val	Cys
	260	265	270
Glu Phe Ile Lys	Lys Lys Lys		
	275		

<210> 98

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 98

cgctgactat gttgcccaaga gtgg 24

<210> 99

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 99

gatgatggag gctccatacc tcag 24

<210> 100

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 100

gtgttcattg gcgtgaatga ccttgaaagg gagggacagt acatgttcac 50

<210> 101

<211> 2574

<212> DNA

<213> Homo sapiens

<400> 101

ggtttctatcg attcgaattc ggccacactg gccggatcct ctagagatcc 50

ctcgacctcg acccacgcgt ccgctgctct ccgcccgtgt ggagtggtag 100

gggcctgggt gggaatgggc gtgtgccagc gcacgcgcgc tccctggaag 150

gagaagtctc agctagaacg agcggcccta ggttttcgga agggaggatc 200

agggatgttt gcgagcggct ggaaccagac ggtgccgata gaggaagcgg 250

gctccatggc tgcctctctg ctgctgcccc tgctgctgtt gctaccgctg 300

ctgctgctga agctacacct ctggcgcag ttgcgctggc ttccggcgga 350

cttggccttt gcggtgcgag ctctgtgctg caaaagggtt cttcgagctc 400

gcgccctggc cgcggctgcc gccgaccgg aaggtcccga ggggggctgc 450

agcctggcct ggcgctcgc ggaactggcc cagcagcgcg ccgcgcacac 500

ctttctcatt cacggctcgc ggcgcttttag ctactcagag gcggagcgcg 550

agagtaacag ggctgcacgc gccttcttac gtgcgctagg ctgggactgg 600

ggacccgacg gcggcgacag cggcgagggg agcgtggag aaggcgagcg 650

ggcagcgccg ggagccggag atgcagcggc cggaagcggc gcggagtttg 700

ccggagggga cggtgccgcc agaggtggag gagccgccgc ccctctgtca 750

cctggagcaa ctgtggcgct gctcctcccc gctggcccag agtttctgtg 800

gctctggttc gggctggcca aggcggcct gcgcactgcc tttgtgcca 850

ccgccctgcg ccggggcccc ctgctgcaact gcctccgcag ctgcggcgcg 900

cgcgcgctgg tgctggcgcc agagtttctg gagtccttgg agccggacct 950  
 gcccgccctg agagccatgg ggctccacct gtgggctgca ggcccaggaa 1000  
 cccaccctgc tggaattagc gatttgctgg ctgaagtgtc cgctgaagtg 1050  
 gatgggccag tgccaggata cctctcttcc ccccagagca taacagacac 1100  
 gtgcctgtac atcttcacct ctggcaccac gggcctcccc aaggctgctc 1150  
 ggatcagtca tctgaagatc ctgcaatgcc agggcttcta tcagctgtgt 1200  
 ggtgtccacc aggaagatgt gatctacctc gccctccac tctaccacat 1250  
 gtccggttcc ctgctgggca tcgtgggctg catgggcatt ggggccacag 1300  
 tgggtgtgaa atccaagttc tcggctggtc agttctggga agattgccag 1350  
 cagcacaggg tgacggtgtt ccagtacatt ggggagctgt gccgatacct 1400  
 tgtcaaccag ccccgagca aggcagaacg tggccataag gtccggctgg 1450  
 cagtgggcag cgggctgcgc ccagatacct gggagcgttt tgtgcggcgc 1500  
 ttcgggcccc tgcaggtgct ggagacatat ggactgacag agggcaacgt 1550  
 ggccaccatc aactacacag gacagcgggg cgctgtgggg cgtgcttcct 1600  
 ggctttacaa gcatactctc cccttctcct tgattcgcta tgatgtcacc 1650  
 acaggagagc caattcggga ccccgagggg cactgtatgg ccacatctcc 1700  
 aggtgagcca gggctgctgg tggccccggt aagccagcag tccccattcc 1750  
 tgggctatgc tggcgggcca gagctggccc aggggaagtt gctaaaggat 1800  
 gtcttccggc ctggggatgt tttcttcaac actggggacc tgctggtctg 1850  
 cgatgaccaa ggttttctcc gcttccatga tcgtactgga gacaccttca 1900  
 ggtggaaggg ggagaatgtg gccacaaccg aggtggcaga ggtcttcgag 1950  
 gccctagatt ttcttcagga ggtgaacgtc tatggagtca ctgtgccagg 2000  
 gcatgaaggc agggctggaa tggcagccct agttctgcgt ccccccacg 2050  
 ctttggacct tatgcagctc tacaccacg tgtctgagaa cttgccacct 2100  
 tatgcccggc ccgattcct caggctccag gagtctttgg ccaccacaga 2150  
 gaccttcaaa cagcagaaag ttcggatggc aaatgagggc ttcgaccca 2200  
 gcaccctgtc tgaccactg tacgttctgg accaggctgt aggtgcctac 2250  
 ctgccccca caactgccc gtacagcgcc ctctggcag gaaaccttcg 2300  
 aatctgagaa cttccacacc tgaggcacct gagagaggaa ctctgtgggg 2350

tggggggccgt tgcaggtgta ctgggctgtc agggatcttt tctataccag 2400  
 aactgcggctc actatittgt aataaatgtg gctggagctg atccagctgt 2450  
 ctctgaccta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaag ggcgcccgcg 2500  
 actctagagt cgacctgcag tagggataac agggtaataa gcttgccgc 2550  
 catggcccaa cttgtttatt gcag 2574

<210> 102

<211> 730

<212> PRT

<213> Homo sapiens

<400> 102

Met	Gly	Val	Cys	Gln	Arg	Thr	Arg	Ala	Pro	Trp	Lys	Glu	Lys	Ser	1	5	10	15
Gln	Leu	Glu	Arg	Ala	Ala	Leu	Gly	Phe	Arg	Lys	Gly	Gly	Ser	Gly	20	25	30	
Met	Phe	Ala	Ser	Gly	Trp	Asn	Gln	Thr	Val	Pro	Ile	Glu	Glu	Ala	35	40	45	
Gly	Ser	Met	Ala	Ala	Leu	Leu	Leu	Leu	Pro	Leu	Leu	Leu	Leu	Leu	50	55	60	
Pro	Leu	Leu	Leu	Leu	Lys	Leu	His	Leu	Trp	Pro	Gln	Leu	Arg	Trp	65	70	75	
Leu	Pro	Ala	Asp	Leu	Ala	Phe	Ala	Val	Arg	Ala	Leu	Cys	Cys	Lys	80	85	90	
Arg	Ala	Leu	Arg	Ala	Arg	Ala	Leu	Ala	Ala	Ala	Ala	Ala	Asp	Pro	95	100	105	
Glu	Gly	Pro	Glu	Gly	Gly	Cys	Ser	Leu	Ala	Trp	Arg	Leu	Ala	Glu	110	115	120	
Leu	Ala	Gln	Gln	Arg	Ala	Ala	His	Thr	Phe	Leu	Ile	His	Gly	Ser	125	130	135	
Arg	Arg	Phe	Ser	Tyr	Ser	Glu	Ala	Glu	Arg	Glu	Ser	Asn	Arg	Ala	140	145	150	
Ala	Arg	Ala	Phe	Leu	Arg	Ala	Leu	Gly	Trp	Asp	Trp	Gly	Pro	Asp	155	160	165	
Gly	Gly	Asp	Ser	Gly	Glu	Gly	Ser	Ala	Gly	Glu	Gly	Glu	Arg	Ala	170	175	180	
Ala	Pro	Gly	Ala	Gly	Asp	Ala	Ala	Ala	Gly	Ser	Gly	Ala	Glu	Phe	185	190	195	
Ala	Gly	Gly	Asp	Gly	Ala	Ala	Arg	Gly	Gly	Gly	Ala	Ala	Ala	Pro	200	205	210	

Leu Ser Pro Gly	Ala Thr Val Ala Leu	Leu Leu Pro Ala Gly Pro	215	220	225
Glu Phe Leu Trp	Leu Trp Phe Gly Leu	Ala Lys Ala Gly Leu Arg	230	235	240
Thr Ala Phe Val	Pro Thr Ala Leu Arg	Arg Gly Pro Leu Leu His	245	250	255
Cys Leu Arg Ser	Cys Gly Ala Arg Ala	Leu Val Leu Ala Pro Glu	260	265	270
Phe Leu Glu Ser	Leu Glu Pro Asp Leu	Pro Ala Leu Arg Ala Met	275	280	285
Gly Leu His Leu	Trp Ala Ala Gly Pro	Gly Thr His Pro Ala Gly	290	295	300
Ile Ser Asp Leu	Leu Ala Glu Val Ser	Ala Glu Val Asp Gly Pro	305	310	315
Val Pro Gly Tyr	Leu Ser Ser Pro Gln	Ser Ile Thr Asp Thr Cys	320	325	330
Leu Tyr Ile Phe	Thr Ser Gly Thr Thr	Gly Leu Pro Lys Ala Ala	335	340	345
Arg Ile Ser His	Leu Lys Ile Leu Gln	Cys Gln Gly Phe Tyr Gln	350	355	360
Leu Cys Gly Val	His Gln Glu Asp Val	Ile Tyr Leu Ala Leu Pro	365	370	375
Leu Tyr His Met	Ser Gly Ser Leu Leu	Gly Ile Val Gly Cys Met	380	385	390
Gly Ile Gly Ala	Thr Val Val Leu Lys	Ser Lys Phe Ser Ala Gly	395	400	405
Gln Phe Trp Glu	Asp Cys Gln Gln His	Arg Val Thr Val Phe Gln	410	415	420
Tyr Ile Gly Glu	Leu Cys Arg Tyr Leu	Val Asn Gln Pro Pro Ser	425	430	435
Lys Ala Glu Arg	Gly His Lys Val Arg	Leu Ala Val Gly Ser Gly	440	445	450
Leu Arg Pro Asp	Thr Trp Glu Arg Phe	Val Arg Arg Phe Gly Pro	455	460	465
Leu Gln Val Leu	Glu Thr Tyr Gly Leu	Thr Glu Gly Asn Val Ala	470	475	480
Thr Ile Asn Tyr	Thr Gly Gln Arg Gly	Ala Val Gly Arg Ala Ser	485	490	495
Trp Leu Tyr Lys	His Ile Phe Pro Phe	Ser Leu Ile Arg Tyr Asp			

500	505	510
Val Thr Thr Gly Glu Pro Ile Arg Asp 515	Pro Gln Gly His Cys Met 520	
Ala Thr Ser Pro Gly Glu Pro Gly Leu 530	Leu Val Ala Pro Val Ser 535	540
Gln Gln Ser Pro Phe Leu Gly Tyr Ala 545	Gly Gly Pro Glu Leu Ala 550	555
Gln Gly Lys Leu Leu Lys Asp Val Phe 560	Arg Pro Gly Asp Val Phe 565	570
Phe Asn Thr Gly Asp Leu Leu Val Cys 575	Asp Asp Gln Gly Phe Leu 580	585
Arg Phe His Asp Arg Thr Gly Asp Thr 590	Phe Arg Trp Lys Gly Glu 595	600
Asn Val Ala Thr Thr Glu Val Ala Glu 605	Val Phe Glu Ala Leu Asp 610	615
Phe Leu Gln Glu Val Asn Val Tyr Gly 620	Val Thr Val Pro Gly His 625	630
Glu Gly Arg Ala Gly Met Ala Ala Leu 635	Val Leu Arg Pro Pro His 640	645
Ala Leu Asp Leu Met Gln Leu Tyr Thr 650	His Val Ser Glu Asn Leu 655	660
Pro Pro Tyr Ala Arg Pro Arg Phe Leu 665	Arg Leu Gln Glu Ser Leu 670	675
Ala Thr Thr Glu Thr Phe Lys Gln Gln 680	Lys Val Arg Met Ala Asn 685	690
Glu Gly Phe Asp Pro Ser Thr Leu Ser 695	Asp Pro Leu Tyr Val Leu 700	705
Asp Gln Ala Val Gly Ala Tyr Leu Pro 710	Leu Thr Thr Ala Arg Tyr 715	720
Ser Ala Leu Leu Ala Gly Asn Leu Arg 725	Ile 730	

<210> 103

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 103

gagagccatg gggctccacc tg 22

<210> 104  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 104  
ggagaatgtg gccacaac 18

<210> 105  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 105  
gccctggcac agtgactcca tagacg 26

<210> 106  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 106  
atccacttca gcgacac 18

<210> 107  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 107  
ccagtgccag gatacctctc ttccccccag agcataacag acacg 45

<210> 108  
<211> 2579  
<212> DNA  
<213> Homo sapiens

<400> 108  
cctgtgttaa gctgaggttt cccctagatc tcgtatatcc ccaacacata 50  
cctccacgca cacacatccc caagaacctc gagctcacac caacagacac 100  
acgcgcgcac acacactcgc tctcgtttgt ccatctccct cccgggggag 150  
ccggcgcgcg ctcccacctt tgccgcacac tccggcgagc cgagcccgcg 200

gcgctccagg attctgcggc tcggaactcg gattgcagct ctgaaccccc 250  
 atggtgggttt tttaaacact tcttttcctt ctcttcctcg ttttgattgc 300  
 accgtttcca tctgggggct agaggagcaa ggcagcagcc ttcccagcca 350  
 gcccttggtg gcttgccatc gtccatctgg cttataaaaag tttgctgagc 400  
 gcagtccaga gggctgcgct gctcgtcccc tcggctggca gaagggggtg 450  
 acgctgggca gcggcgagga gcgcgccgct gcctctggcg ggctttcggc 500  
 ttgaggggca aggtgaagag cgcaccggcc gtgggggttta ccgagctgga 550  
 tttgtatgtt gcaccatgcc ttcttgatc ggggctgtga ttcttcccct 600  
 cttggggctg ctgctctccc tccccgccgg ggcggtatgtg aaggctcgga 650  
 gctgcggaga ggtccgccag gcgtacggtg ccaagggtt cagcctggcg 700  
 gacatcccct accaggagat cgcaggggaa cacttaagaa tctgtcctca 750  
 ggaatataca tgotgcacca cagaaatgga agacaagtta agccaacaaa 800  
 gcaaactcga atttgaaaac cttgtggaag agacaagcca ttttgtgcgc 850  
 accacttttg tgtccaggca taagaaattt gacgaatttt tccgagagct 900  
 cctggagaat gcagaaaagt cactaaatga tatgtttgta cggacctatg 950  
 gcatgctgta catgcagaat tcagaagtct tccaggacct cttcacagag 1000  
 ctgaaaagggt actacactgg gggtaatgtg aatctggagg aaatgctcaa 1050  
 tgacttttgg gctcggctcc tggaacggat gtttcagctg ataaaccctc 1100  
 agtatcactt cagtgaagac tacctggaat gtgtgagcaa atacactgac 1150  
 cagctcaagc catttgagga cgtgccccgg aaactgaaga ttcagggttac 1200  
 ccgcgccttc attgctgccg ggacctttgt ccaggggctg actgtgggca 1250  
 gagaagttgc aaaccgagtt tccaagggtca gcccaacccc aggggtgtatc 1300  
 cgtgccctca tgaagatgct gtactgccca tactgtcggg ggcttcccac 1350  
 tgtgaggccc tgcaacaact actgtctcaa cgtcatgaag ggctgcttgg 1400  
 caaatcaggc tgacctgac acagagtgga atctgtttat agatgcaatg 1450  
 ctcttgggtg cagagcgact ggaggggcca ttcaacattg agtcgggtcat 1500  
 ggacccgata gatgtcaaga tttctgaagc cattatgaac atgcaagaaa 1550  
 acagcatgca ggtgtctgca aaggctcttc agggatgtgg tcagcccaaa 1600  
 cctgtccag ccctcagatc tgcccgtca gctcctgaaa attttaatac 1650



acgttttcagg ccctacaatc ctgaggaaaag accaacaact gctgcaggca 1700  
 caagcttgga cgggctggtc acagacataa aagagaaatt gaagctctct 1750  
 aaaaaggtct ggtcagcatt accctacact atctgcaagg acgagagcgt 1800  
 gacagcgggc acgtccaacg aggaggaatg ctggaacggg cacagcaaag 1850  
 ccagatactt gcctgagatc atgaatgatg ggctcaccaa ccagatcaac 1900  
 aatccccgagg tggatgtgga catcactcgg cctgacactt tcatcagaca 1950  
 gcagattatg gctctccgtg tgatgaccaa caaactaaaa aacgcctaca 2000  
 atggcaatga tgtcaatttc caggacacaa gtgatgaatc cagtgggtca 2050  
 gggagtggca gtgggtgcat ggatgacgtg tgtcccacgg agtttgagtt 2100  
 tgtcaccaca gaggcccccg cagtggatcc cgaccggaga gaggtggact 2150  
 cttctgcagc ccagcgtggc cactccctgc tctcctggtc tctcacctgc 2200  
 attgtcctgg cactgcagag actgtgcaga taatcttggg tttttggtca 2250  
 gatgaaactg catttttagct atctgaatgg ccaactcact tcttttctta 2300  
 cactcttggga caatggacca tgccacaaaa acttaccgtt ttctatgaga 2350  
 agagagcagt aatgcaatct gcctcccttt ttgttttccc aaagagtacc 2400  
 ggggtgccaga ctgaactgct tcctctttcc ttcagctatc tgtgggggacc 2450  
 ttgtttattc tagagagaat tcttactcaa atttttcgta ccaggagatt 2500  
 ttcttacctt catttgcttt tatgctgcag aagtaaagga atctcacgtt 2550  
 gtgagggttt tttttttctc atttaaaat 2579

<210> 109  
 <211> 555  
 <212> PRT  
 <213> Homo sapiens

<400> 109  
 Met Pro Ser Trp Ile Gly Ala Val Ile Leu Pro Leu Leu Gly Leu  
 1 5 10 15  
 Leu Leu Ser Leu Pro Ala Gly Ala Asp Val Lys Ala Arg Ser Cys  
 20 25 30  
 Gly Glu Val Arg Gln Ala Tyr Gly Ala Lys Gly Phe Ser Leu Ala  
 35 40 45  
 Asp Ile Pro Tyr Gln Glu Ile Ala Gly Glu His Leu Arg Ile Cys  
 50 55 60  
 Pro Gln Glu Tyr Thr Cys Cys Thr Thr Glu Met Glu Asp Lys Leu  
 65 70 75

Ser	Gln	Gln	Ser	Lys	Leu	Glu	Phe	Glu	Asn	Leu	Val	Glu	Glu	Thr	80	85	90
Ser	His	Phe	Val	Arg	Thr	Thr	Phe	Val	Ser	Arg	His	Lys	Lys	Phe	95	100	105
Asp	Glu	Phe	Phe	Arg	Glu	Leu	Leu	Glu	Asn	Ala	Glu	Lys	Ser	Leu	110	115	120
Asn	Asp	Met	Phe	Val	Arg	Thr	Tyr	Gly	Met	Leu	Tyr	Met	Gln	Asn	125	130	135
Ser	Glu	Val	Phe	Gln	Asp	Leu	Phe	Thr	Glu	Leu	Lys	Arg	Tyr	Tyr	140	145	150
Thr	Gly	Gly	Asn	Val	Asn	Leu	Glu	Glu	Met	Leu	Asn	Asp	Phe	Trp	155	160	165
Ala	Arg	Leu	Leu	Glu	Arg	Met	Phe	Gln	Leu	Ile	Asn	Pro	Gln	Tyr	170	175	180
His	Phe	Ser	Glu	Asp	Tyr	Leu	Glu	Cys	Val	Ser	Lys	Tyr	Thr	Asp	185	190	195
Gln	Leu	Lys	Pro	Phe	Gly	Asp	Val	Pro	Arg	Lys	Leu	Lys	Ile	Gln	200	205	210
Val	Thr	Arg	Ala	Phe	Ile	Ala	Ala	Arg	Thr	Phe	Val	Gln	Gly	Leu	215	220	225
Thr	Val	Gly	Arg	Glu	Val	Ala	Asn	Arg	Val	Ser	Lys	Val	Ser	Pro	230	235	240
Thr	Pro	Gly	Cys	Ile	Arg	Ala	Leu	Met	Lys	Met	Leu	Tyr	Cys	Pro	245	250	255
Tyr	Cys	Arg	Gly	Leu	Pro	Thr	Val	Arg	Pro	Cys	Asn	Asn	Tyr	Cys	260	265	270
Leu	Asn	Val	Met	Lys	Gly	Cys	Leu	Ala	Asn	Gln	Ala	Asp	Leu	Asp	275	280	285
Thr	Glu	Trp	Asn	Leu	Phe	Ile	Asp	Ala	Met	Leu	Leu	Val	Ala	Glu	290	295	300
Arg	Leu	Glu	Gly	Pro	Phe	Asn	Ile	Glu	Ser	Val	Met	Asp	Pro	Ile	305	310	315
Asp	Val	Lys	Ile	Ser	Glu	Ala	Ile	Met	Asn	Met	Gln	Glu	Asn	Ser	320	325	330
Met	Gln	Val	Ser	Ala	Lys	Val	Phe	Gln	Gly	Cys	Gly	Gln	Pro	Lys	335	340	345
Pro	Ala	Pro	Ala	Leu	Arg	Ser	Ala	Arg	Ser	Ala	Pro	Glu	Asn	Phe	350	355	360
Asn	Thr	Arg	Phe	Arg	Pro	Tyr	Asn	Pro	Glu	Glu	Arg	Pro	Thr	Thr			

365	370	375
Ala Ala Gly Thr Ser Leu Asp Arg Leu Val Thr Asp Ile Lys Glu		
380	385	390
Lys Leu Lys Leu Ser Lys Lys Val Trp Ser Ala Leu Pro Tyr Thr		
395	400	405
Ile Cys Lys Asp Glu Ser Val Thr Ala Gly Thr Ser Asn Glu Glu		
410	415	420
Glu Cys Trp Asn Gly His Ser Lys Ala Arg Tyr Leu Pro Glu Ile		
425	430	435
Met Asn Asp Gly Leu Thr Asn Gln Ile Asn Asn Pro Glu Val Asp		
440	445	450
Val Asp Ile Thr Arg Pro Asp Thr Phe Ile Arg Gln Gln Ile Met		
455	460	465
Ala Leu Arg Val Met Thr Asn Lys Leu Lys Asn Ala Tyr Asn Gly		
470	475	480
Asn Asp Val Asn Phe Gln Asp Thr Ser Asp Glu Ser Ser Gly Ser		
485	490	495
Gly Ser Gly Ser Gly Cys Met Asp Asp Val Cys Pro Thr Glu Phe		
500	505	510
Glu Phe Val Thr Thr Glu Ala Pro Ala Val Asp Pro Asp Arg Arg		
515	520	525
Glu Val Asp Ser Ser Ala Ala Gln Arg Gly His Ser Leu Leu Ser		
530	535	540
Trp Ser Leu Thr Cys Ile Val Leu Ala Leu Gln Arg Leu Cys Arg		
545	550	555

<210> 110

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 110

aagcgtgaca gcgggcacgt c 21

<210> 111

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 111

tgcacagtct ctgcagtgcc cagg 24

<210> 112

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 112

gaatgctgga acgggcacag caaagccaga tacttgcttg 40

<210> 113

<211> 4649

<212> DNA

<213> Homo sapiens

<400> 113

cggacgcgtg ggcggacgcg tgggcaaaag aactcggagt gccaaagcta 50

aataagtttag ctgagaaaac gcacgcagtt tgcagcgcct gcgcggggtg 100

cgccaactac gcaaagacca agcgggctcc gcgcggaccg gccgcggggc 150

tagggaccgc gctttggcct tcaggctccc tagcagcggg gaaaaggaat 200

tgctgcccgg agtttctgcg gaggtggagg gagatcagga aacggcttct 250

tcctcacttc gccgcctggt gagtgtcggg gagattggca aacgcctagg 300

aaaggactgg ggaaaatagc cctgggaaag tggagaaggt gatcaggagg 350

ccggtccact acggcagttt atctgtctga tcagagccag acgcgacgcg 400

tccacttcgc agttctttcc aggtgtgggg accgcaggac agacggccga 450

tcccgccgcc ctccgtacca gcaactccag gagagtcagc ctgcctcccc 500

aacgtcgagg gcgctctggc cagcaaaagt tcctgtccac tgtgattctc 550

aattccttgc ttgggttttt tctccagaga acttttgggt ggagatatta 600

acttttttct tttttttttt ccttgggtgga agctgctcta gggagggggg 650

aggaggagga gaaagtgaaa tgtgctggag aagagcgagc cctccttgtt 700

cttccggagt cccatccatt aagccatcac ttctggaaga ttaaagttgt 750

cggacatggt gacagctgag aggagaggag gatttcttgc cagggtggaga 800

gtcttcaccg tctgttgggt gcatgtgtgc gccgcagcg gcgcggggcg 850

cgtggttctc cgcgtggagt ctcacctggg acctgagtga atggctccca 900

ggggctgtgc ggggcatccg cctccgcctt ctccacaggc ctgtgtctgt 950

cctggaaaga tgctagcaat gggggcgctg gcaggattct ggatcctctg 1000

cctcctcact tatggttacc tgtcctgggg ccaggcctta gaagaggagg 1050  
aagaaggggc cttactagct caagctggag agaaactaga gcccagcaca 1100  
acttccacct cccagcccca tctcattttc atcctagcgg atgatcaggg 1150  
atttagagat gtgggttacc acggatctga gattaaaaca cctactcttg 1200  
acaagctcgc tgccgaagga gttaaactgg agaactacta tgtccagcct 1250  
atttgcacac catccaggag tcagtttatt actggaaagt atcagataca 1300  
caccggactt caacattcta tcataagacc tacccaaccc aactgtttac 1350  
ctctggacaa tgccacccta cctcagaaac tgaaggagggt tggatattca 1400  
acgcatatgg tcggaaaatg gcacttgggt tttaacagaa aagaatgcat 1450  
gcccaccaga agaggatttg ataccttttt tggttccctt ttgggaagtg 1500  
gggattacta tacacactac aaatgtgaca gtccctgggat gtgtggctat 1550  
gacttgatg aaaacgacaa tgctgcctgg gactatgaca atggcatata 1600  
ctccacacag atgtacactc agagagtaca gcaaactcta gcttcccata 1650  
acccacacaa gcctatatat ttatatactg cctatcaagc tggtcattca 1700  
ccactgcaag ctccctggcag gtatttcgaa cactacogat ccattatcaa 1750  
cataaacagg agaagatatg ctgccatgct ttcctgctta gatgaagcaa 1800  
tcaacaacgt gacattggct ctaaagactt atggtttcta taacaacagc 1850  
attatcattt actcttcaga taatggtggc cagcctacgg caggaggagg 1900  
taactggcct ctcagaggta gcaaaggaa atattgggaa ggagggatcc 1950  
gggctgtagg ctttgtgcat agcccacttc tgaaaaacaa gggaacagtg 2000  
tgtaaggaac ttgtgcacat cactgactgg taccctactc tcatttcact 2050  
ggctgaagga cagattgatg aggacattca actagatggc tatgatattc 2100  
gggagaccat aagtgagggt ctctgctcac ccgagtaga tattttgcat 2150  
aacattgacc cctatacacc aaggcaaaaa atggctcctg ggcagcaggc 2200  
tatgggatct ggaacactgc aatccagtca gccatcagag tgcagcactg 2250  
gaaattgctt acaggaaatc ctggctacag cgactgggtc cccctcagt 2300  
ctttcagcaa cctgggaccg aaccggtggc acaatgaacg gatcaccttg 2350  
tcaactggca aaagtgtatg gcttttcaac atcacagccg acccatatga 2400  
gagggtggac ctatctaaca ggtatccagg aatcgtgaag aagctcctac 2450

ggaggctctc acagttcaac aaaactgcag tgccgggtcag gtatcccccc 2500  
 aaagacccca gaagtaaccc taggctcaat ggaggggtct ggggaccatg 2550  
 gtataaagag gaaaccaaga aaaagaagcc aagcaaaaat caggctgaga 2600  
 aaaagcaaaa gaaaagcaaa aaaaagaaga agaaacagca gaaagcagtc 2650  
 tcaggtaaac cagcaaattt ggctcgataa tatcgctggc ctaagcgtca 2700  
 ggcttggttt catgctgtgc cactccagag acttctgcc cctggccgcc 2750  
 aactgaaaa ctgtcctgct cagtgccaa gtgctactct tgcaagccac 2800  
 acttagagag agtggagatg tttatttctc tcgctccttt agaaaacgtg 2850  
 gtgagtcctg agttccactg ctgtgcttca gtcaactgac caaacactgc 2900  
 tttgaattat aggaggagaa caataaccta ccatccgcaa gcatgctaata 2950  
 ttgatggaag ttacagggtg gcatgattaa aactaccttt gataaattac 3000  
 agtcaaagat tgtgtcacct caaaggcctt gaagaatata ttttcttggt 3050  
 gaatttttgt atgtctgtca tatgacactt gggtttttta attaatctta 3100  
 ttttatatat ataaatatat gtttcttttc ctgtgaaaag ctgtttttct 3150  
 cacatgtgaa cagcttgac ctcattttac catgctgag ggaatggcaa 3200  
 ataagaatgt ttgagcacac tgcccacaat gaatgtaact attttctaaa 3250  
 cactttacta gaagaacatt tcagtataaa aaacctaatt tatttttaca 3300  
 gaaaaatatt ttgttggttt tataaaaagt tatgcaaag acttttattt 3350  
 ttatttctg cataccatta gaagaatttt atttcatttc ttcaaattat 3400  
 caagcactgt aatactataa attaatgtaa tactgtgtga attcagacta 3450  
 taaaaacat cattcagaaa actttataat cgtcattgtt caatcaagat 3500  
 tttgaatgta ataagatgaa tatattcctt acaaattact tggaaattca 3550  
 atgtttgtgc agagttgaga caactttatt gtttctatca taaactattt 3600  
 atgtatctta attattaaaa tgatttactt tatggcacta gaaaatttac 3650  
 tgtggctttt ctgatotaac ttctagctaa aattgtatca ttggctcctaa 3700  
 aaaataaaaa tctttactaa taggcaattg aaggaatggt ttgctaacaa 3750  
 ccacagtaat ataatatgat ttacagata gatgcttccc cttggctatg 3800  
 acatggagaa agattttccc ataataataa ctaatattta tattagggtg 3850  
 gtgcaaaaact agttgcgggt tttccatta aaagtaataa cttactctt 3900

atacaaagtg gacactgtgg ggagatacag agaaatggaa gatacggatc 3950  
 ctgcctggag taggtaacct tgcttggaac ccccatatgc aaacgtcatg 4000  
 aggagaatta aaggagtatt atcagtaatg aagtttatca tgggtcatca 4050  
 atgagcatag attggtgtgg atcctgtaga ccctggtgtt ttctttgaag 4100  
 tgccctctcc taatgcagag gccttgaagc ttacagtata cacttgaaaa 4150  
 gtcacagata gctagaatta tgatctttga agttataact gtgatctgaa 4200  
 aatgtgtgtg gtggtatgac agcataccat taaatacatt tacatcacag 4250  
 ctcaaaggac tgtgatataa tccatttata tcacaactca aaggactgtg 4300  
 atataatcca tttatatcac agctcacagt ttctgaaaat gtataaaaga 4350  
 atctataatc tagtactgaa attactaaat tgggtaagat gatttaaagt 4400  
 attttaattt taacatttta tttctagaat atatggctcc attttatttt 4450  
 atagtgtaaa gttgtatttc ctaaagtttg tgttttgtcg acagtatctt 4500  
 ttaaagtagt cttaaaaata aaggcatatt gttcatgttt aaaaaaaaaa 4550  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4600  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 4649

<210> 114

<211> 515

<212> PRT

<213> Homo sapiens

<400> 114

Met	Ala	Pro	Arg	Gly	Cys	Ala	Gly	His	Pro	Pro	Pro	Pro	Ser	Pro
1				5					10					15
Gln	Ala	Cys	Val	Cys	Pro	Gly	Lys	Met	Leu	Ala	Met	Gly	Ala	Leu
				20					25					30
Ala	Gly	Phe	Trp	Ile	Leu	Cys	Leu	Leu	Thr	Tyr	Gly	Tyr	Leu	Ser
				35					40					45
Trp	Gly	Gln	Ala	Leu	Glu	Glu	Glu	Glu	Glu	Gly	Ala	Leu	Leu	Ala
				50					55					60
Gln	Ala	Gly	Glu	Lys	Leu	Glu	Pro	Ser	Thr	Thr	Ser	Thr	Ser	Gln
				65					70					75
Pro	His	Leu	Ile	Phe	Ile	Leu	Ala	Asp	Asp	Gln	Gly	Phe	Arg	Asp
				80					85					90
Val	Gly	Tyr	His	Gly	Ser	Glu	Ile	Lys	Thr	Pro	Thr	Leu	Asp	Lys
				95					100					105
Leu	Ala	Ala	Glu	Gly	Val	Lys	Leu	Glu	Asn	Tyr	Tyr	Val	Gln	Pro

110	115	120
Ile Cys Thr Pro Ser Arg Ser Gln Phe	Ile Thr Gly Lys Tyr Gln	
125	130	135
Ile His Thr Gly Leu Gln His Ser Ile	Ile Arg Pro Thr Gln Pro	
140	145	150
Asn Cys Leu Pro Leu Asp Asn Ala Thr	Leu Pro Gln Lys Leu Lys	
155	160	165
Glu Val Gly Tyr Ser Thr His Met Val	Gly Lys Trp His Leu Gly	
170	175	180
Phe Asn Arg Lys Glu Cys Met Pro Thr	Arg Arg Gly Phe Asp Thr	
185	190	195
Phe Phe Gly Ser Leu Leu Gly Ser Gly	Asp Tyr Tyr Thr His Tyr	
200	205	210
Lys Cys Asp Ser Pro Gly Met Cys Gly	Tyr Asp Leu Tyr Glu Asn	
215	220	225
Asp Asn Ala Ala Trp Asp Tyr Asp Asn	Gly Ile Tyr Ser Thr Gln	
230	235	240
Met Tyr Thr Gln Arg Val Gln Gln Ile	Leu Ala Ser His Asn Pro	
245	250	255
Thr Lys Pro Ile Phe Leu Tyr Thr Ala	Tyr Gln Ala Val His Ser	
260	265	270
Pro Leu Gln Ala Pro Gly Arg Tyr Phe	Glu His Tyr Arg Ser Ile	
275	280	285
Ile Asn Ile Asn Arg Arg Arg Tyr Ala	Ala Met Leu Ser Cys Leu	
290	295	300
Asp Glu Ala Ile Asn Asn Val Thr Leu	Ala Leu Lys Thr Tyr Gly	
305	310	315
Phe Tyr Asn Asn Ser Ile Ile Ile Tyr	Ser Ser Asp Asn Gly Gly	
320	325	330
Gln Pro Thr Ala Gly Gly Ser Asn Trp	Pro Leu Arg Gly Ser Lys	
335	340	345
Gly Thr Tyr Trp Glu Gly Gly Ile Arg	Ala Val Gly Phe Val His	
350	355	360
Ser Pro Leu Leu Lys Asn Lys Gly Thr	Val Cys Lys Glu Leu Val	
365	370	375
His Ile Thr Asp Trp Tyr Pro Thr Leu	Ile Ser Leu Ala Glu Gly	
380	385	390
Gln Ile Asp Glu Asp Ile Gln Leu Asp	Gly Tyr Asp Ile Trp Glu	
395	400	405



Thr	Ile	Ser	Glu	Gly	Leu	Arg	Ser	Pro	Arg	Val	Asp	Ile	Leu	His
				410					415					420
Asn	Ile	Asp	Pro	Tyr	Thr	Pro	Arg	Gln	Lys	Met	Ala	Pro	Gly	Gln
				425					430					435
Gln	Ala	Met	Gly	Ser	Gly	Thr	Leu	Gln	Ser	Ser	Gln	Pro	Ser	Glu
				440					445					450
Cys	Ser	Thr	Gly	Asn	Cys	Leu	Gln	Glu	Ile	Leu	Ala	Thr	Ala	Thr
				455					460					465
Gly	Ser	Pro	Leu	Ser	Leu	Ser	Ala	Thr	Trp	Asp	Arg	Thr	Gly	Gly
				470					475					480
Thr	Met	Asn	Gly	Ser	Pro	Cys	Gln	Leu	Ala	Lys	Val	Tyr	Gly	Phe
				485					490					495
Ser	Thr	Ser	Gln	Pro	Thr	His	Met	Arg	Gly	Trp	Thr	Tyr	Leu	Thr
				500					505					510
Gly	Ile	Gln	Glu	Ser										
				515										

<210> 115  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 115  
 cccaacccaa ctgtttacct ctgg 24

<210> 116  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 116  
 ctctctgagt gtacatctgt gtgg 24

<210> 117  
 <211> 53  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<220>  
 <221> unsure  
 <222> 33  
 <223> unknown base

<400> 117  
gccaccctac ctcagaaact gaaggaggtt ggntattcaa cgcatatggt 50  
cgg 53

<210> 118  
<211> 2260  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2009, 2026, 2033, 2055, 2074, 2078, 2086  
<223> unknown base

<400> 118  
cggacgcgtg ggtgcgagtg gagcggagga cccgagcggc tgaggagaga 50  
ggaggcggcg gcttagctgc tacgggggtcc ggccggcgcc ctcccgaggg 100  
gggctcagga ggaggaagga ggacccgtgc gagaatgcct ctgccctgga 150  
gccttgcgct cccgctgctg ctctcctggg tggcaggtgg ttctgggaac 200  
gcggccagtg caaggcatca cgggttggtta gcatcggcac gtcagcctgg 250  
ggtctgtcac tatggaacta aactggcctg ctgctacggc tggagaagaa 300  
acagcaaggg agtctgtgaa gctacatgcg aacctggatg taagtttggt 350  
gagtgcgtgg gaccaaacia atgcagatgc tttccaggat acaccgggaa 400  
aacctgcagt caagatgtga atgagtgtgg aatgaaaccc cggccatgcc 450  
aacacagatg tgtgaataca cacggaagct acaagtgctt ttgcctcagt 500  
ggccacatgc tcatgccaga tgctacgtgt gtgaactcta ggacatgtgc 550  
catgataaac tgtcagtaca gctgtgaaga cacagaagaa gggccacagt 600  
gcctgtgtcc atcctcagga ctccgcctgg ccccaaattg aagagactgt 650  
ctagatattg atgaatgtgc ctctggtaaa gtcattctgtc cctacaatcg 700  
aagatgtgtg aacacatttg gaagctacta ctgcaaattg cacattgggt 750  
tcgaactgca atatatcagt ggacgatatg actgtataga tataaatgaa 800  
tgtactatgg atagccatac gtgcagccac catgccaatt gcttcaatac 850  
ccaaggggtcc ttcaagtgtg aatgcaagca gggatataaa ggcaatggac 900  
ttcgggtgtt tgctatccct gaaaattctg tgaaggaagt cctcagagca 950  
cctggtacca tcaaagacag aatcaagaag ttgcttgctc acaaaaacag 1000  
catgaaaaag aaggcaaaaa ttaaaaatgt taccacagaa cccaccagga 1050

ctccctacccc taaggtgaac ttgcagccct tcaactatga agagatagtt 1100  
 tccagaggcg ggaactctca tggaggtaaa aaagggaatg aagagaaatg 1150  
 aaagagggggc ttgaggatga gaaaagagaa gagaaagccc tgaagaatga 1200  
 catagaggag cgaagcctgc gaggagatgt gtttttccct aaggtgaatg 1250  
 aagcaggtga attcggcctg attctggtcc aaaggaaagc gctaacttcc 1300  
 aaactggaac ataaagattt aaatatctcg gttgactgca gcttcaatca 1350  
 tgggatctgt gactggaaac aggatagaga agatgatttt gactggaatc 1400  
 ctgctgatcg agataatgct attggcttct atatggcagt tccggccttg 1450  
 gcaggtcaca agaaagacat tggccgattg aaacttctcc tacctgacct 1500  
 gcaaccccaa agcaacttct gtttgctctt tgattaccgg ctggccggag 1550  
 acaaagtcgg gaaacttcga gtgtttgtga aaaacagtaa caatgccctg 1600  
 gcatgggaga agaccacgag tgaggatgaa aagtggaaga cagggaaaat 1650  
 tcagttgtat caaggaactg atgctaccaa aagcatcatt tttgaagcag 1700  
 aacgtggcaa gggcaaaacc ggcgaaatcg cagtggatgg cgtcttgctt 1750  
 gtttcaggct tatgtccaga tagcctttta tctgtggatg actgaatgtt 1800  
 actatcttta tatttgactt tgtatgtcag ttccctgggt tttttgatat 1850  
 tgcacatag gacctctggc attttagaat tactagctga aaaattgtaa 1900  
 tgtaccaaca gaaatattat tgtaagatgc ctttcttgta taagatatgc 1950  
 caatatattgc tttaaatatc atatcactgt atcttctcag tcatttctga 2000  
 atctttccnc attatattat aaaatntgga aangtcagtt tatctcccct 2050  
 cctcngtata tctgatttgt atangtangt tgatgngctt ctctctacaa 2100  
 catttctaga aaatagaaaa aaaagcacag agaaatgttt aactgtttga 2150  
 ctcttatgat acttcttgga aactatgaca tcaaagatag acttttgcct 2200  
 aagtggctta gctgggtctt tcatagccaa acttgtatat ttaattcttt 2250  
 gtaataataa 2260

<210> 119

<211> 338

<212> PRT

<213> Homo sapiens

<400> 119

Met	Pro	Leu	Pro	Trp	Ser	Leu	Ala	Leu	Pro	Leu	Leu	Leu	Ser	Trp
1				5				10					15	

Val	Ala	Gly	Gly	Phe	Gly	Asn	Ala	Ala	Ser	Ala	Arg	His	His	Gly	
				20					25					30	
Leu	Leu	Ala	Ser	Ala	Arg	Gln	Pro	Gly	Val	Cys	His	Tyr	Gly	Thr	
				35					40					45	
Lys	Leu	Ala	Cys	Cys	Tyr	Gly	Trp	Arg	Arg	Asn	Ser	Lys	Gly	Val	
				50					55					60	
Cys	Glu	Ala	Thr	Cys	Glu	Pro	Gly	Cys	Lys	Phe	Gly	Glu	Cys	Val	
				65					70					75	
Gly	Pro	Asn	Lys	Cys	Arg	Cys	Phe	Pro	Gly	Tyr	Thr	Gly	Lys	Thr	
				80					85					90	
Cys	Ser	Gln	Asp	Val	Asn	Glu	Cys	Gly	Met	Lys	Pro	Arg	Pro	Cys	
				95					100					105	
Gln	His	Arg	Cys	Val	Asn	Thr	His	Gly	Ser	Tyr	Lys	Cys	Phe	Cys	
				110					115					120	
Leu	Ser	Gly	His	Met	Leu	Met	Pro	Asp	Ala	Thr	Cys	Val	Asn	Ser	
				125					130					135	
Arg	Thr	Cys	Ala	Met	Ile	Asn	Cys	Gln	Tyr	Ser	Cys	Glu	Asp	Thr	
				140					145					150	
Glu	Glu	Gly	Pro	Gln	Cys	Leu	Cys	Pro	Ser	Ser	Gly	Leu	Arg	Leu	
				155					160					165	
Ala	Pro	Asn	Gly	Arg	Asp	Cys	Leu	Asp	Ile	Asp	Glu	Cys	Ala	Ser	
				170					175					180	
Gly	Lys	Val	Ile	Cys	Pro	Tyr	Asn	Arg	Arg	Cys	Val	Asn	Thr	Phe	
				185					190					195	
Gly	Ser	Tyr	Tyr	Cys	Lys	Cys	His	Ile	Gly	Phe	Glu	Leu	Gln	Tyr	
				200					205					210	
Ile	Ser	Gly	Arg	Tyr	Asp	Cys	Ile	Asp	Ile	Asn	Glu	Cys	Thr	Met	
				215					220					225	
Asp	Ser	His	Thr	Cys	Ser	His	His	Ala	Asn	Cys	Phe	Asn	Thr	Gln	
				230					235					240	
Gly	Ser	Phe	Lys	Cys	Lys	Cys	Lys	Gln	Gly	Tyr	Lys	Gly	Asn	Gly	
				245					250					255	
Leu	Arg	Cys	Ser	Ala	Ile	Pro	Glu	Asn	Ser	Val	Lys	Glu	Val	Leu	
				260					265					270	
Arg	Ala	Pro	Gly	Thr	Ile	Lys	Asp	Arg	Ile	Lys	Lys	Leu	Leu	Ala	
				275					280					285	
His	Lys	Asn	Ser	Met	Lys	Lys	Lys	Ala	Lys	Ile	Lys	Asn	Val	Thr	
				290					295					300	
Pro	Glu	Pro	Thr	Arg	Thr	Pro	Thr	Pro	Lys	Val	Asn	Leu	Gln	Pro	

305

310

315

Phe Asn Tyr Glu Glu Ile Val Ser Arg Gly Gly Asn Ser His Gly  
 320 325 330

Gly Lys Lys Gly Asn Glu Glu Lys  
 335

&lt;210&gt; 120

&lt;211&gt; 22

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 120

cctcagtggc cacatgctca tg 22

&lt;210&gt; 121

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 121

ggctgcacgt atggctatcc atag 24

&lt;210&gt; 122

&lt;211&gt; 50

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 122

gataaactgt cagtacagct gtgaagacac agaagaagg ccacagtgcc 50

&lt;210&gt; 123

&lt;211&gt; 1199

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens

&lt;400&gt; 123

gggagctgct gctgtggctg ctggtgctgt gcgcgctgct cctgctcttg 50

gtgcagctgc tgcgcttcct gagggctgac ggcgacctga cgctactatg 100

ggccgagtgg cagggacgac gcccagaatg ggagctgact gatatggtgg 150

tgtgggtgac tggagcctcg agtgaattg gtgaggagct ggcttaccag 200

ttgtotaaac taggagtttc tcttgtgctg tcagccagaa gagtgcata 250

gctggaaagg gtgaaaagaa gatgcctaga gaatggcaat ttaaaagaaa 300

aagatatact tgttttgccc cttgacctga ccgacactgg ttcccatgaa 350  
gcggctacca aagctgttct ccaggagttt ggtagaatcg acattctggt 400  
caacaatggt ggaatgtccc agcgttctct gtgcatggat accagcttgg 450  
atgtctacag aaagctaata gagcttaact acttagggac ggtgtccttg 500  
acaaaatgtg ttctgcctca catgatcgag aggaagcaag gaaagattgt 550  
tactgtgaat agcatcctgg gtatcatatc tgtacctctt tccattggat 600  
actgtgctag caagcatgct ctccgggggtt tttttaatgg ccttcgaaca 650  
gaacttgcca catacccagg tataatagtt tctaacattt gcccaggacc 700  
tgtgcaatca aatattgtgg agaattccct agctggagaa gtcacaaaga 750  
ctataggcaa taatggagac cagtcccaca agatgacaac cagtcgttgt 800  
gtgcggctga tgttaatcag catggccaat gatttgaaag aagtttggat 850  
ctcagaacaa cctttcttgt tagtaacata tttgtggcaa tacatgcaa 900  
cctgggcctg gtggataacc aacaagatgg ggaagaaaag gattgagaac 950  
tttaagagtg gtgtggatgc agactcttct tattttaaaa tctttaagac 1000  
aaaacatgac tgaaaagagc acctgtactt ttcaagccac tggagggaga 1050  
aatggaaaac atgaaaacag caatcttctt atgcttctga ataatcaaag 1100  
actaatttgt gattttactt tttaatagat atgactttgc ttccaacatg 1150  
gaatgaaata aaaaataaat aataaaagat tgccatgaat cttgcaaaa 1199

<210> 124  
<211> 289  
<212> PRT  
<213> Homo sapiens

<400> 124  
Met Val Val Trp Val Thr Gly Ala Ser Ser Gly Ile Gly Glu Glu  
1 5 10 15  
Leu Ala Tyr Gln Leu Ser Lys Leu Gly Val Ser Leu Val Leu Ser  
20 25 30  
Ala Arg Arg Val His Glu Leu Glu Arg Val Lys Arg Arg Cys Leu  
35 40 45  
Glu Asn Gly Asn Leu Lys Glu Lys Asp Ile Leu Val Leu Pro Leu  
50 55 60  
Asp Leu Thr Asp Thr Gly Ser His Glu Ala Ala Thr Lys Ala Val  
65 70 75  
Leu Gln Glu Phe Gly Arg Ile Asp Ile Leu Val Asn Asn Gly Gly

80										85					90				
Met	Ser	Gln	Arg	Ser	Leu	Cys	Met	Asp	Thr	Ser	Leu	Asp	Val	Tyr					
				95					100					105					
Arg	Lys	Leu	Ile	Glu	Leu	Asn	Tyr	Leu	Gly	Thr	Val	Ser	Leu	Thr					
				110					115					120					
Lys	Cys	Val	Leu	Pro	His	Met	Ile	Glu	Arg	Lys	Gln	Gly	Lys	Ile					
				125					130					135					
Val	Thr	Val	Asn	Ser	Ile	Leu	Gly	Ile	Ile	Ser	Val	Pro	Leu	Ser					
				140					145					150					
Ile	Gly	Tyr	Cys	Ala	Ser	Lys	His	Ala	Leu	Arg	Gly	Phe	Phe	Asn					
				155					160					165					
Gly	Leu	Arg	Thr	Glu	Leu	Ala	Thr	Tyr	Pro	Gly	Ile	Ile	Val	Ser					
				170					175					180					
Asn	Ile	Cys	Pro	Gly	Pro	Val	Gln	Ser	Asn	Ile	Val	Glu	Asn	Ser					
				185					190					195					
Leu	Ala	Gly	Glu	Val	Thr	Lys	Thr	Ile	Gly	Asn	Asn	Gly	Asp	Gln					
				200					205					210					
Ser	His	Lys	Met	Thr	Thr	Ser	Arg	Cys	Val	Arg	Leu	Met	Leu	Ile					
				215					220					225					
Ser	Met	Ala	Asn	Asp	Leu	Lys	Glu	Val	Trp	Ile	Ser	Glu	Gln	Pro					
				230					235					240					
Phe	Leu	Leu	Val	Thr	Tyr	Leu	Trp	Gln	Tyr	Met	Pro	Thr	Trp	Ala					
				245					250					255					
Trp	Trp	Ile	Thr	Asn	Lys	Met	Gly	Lys	Lys	Arg	Ile	Glu	Asn	Phe					
				260					265					270					
Lys	Ser	Gly	Val	Asp	Ala	Asp	Ser	Ser	Tyr	Phe	Lys	Ile	Phe	Lys					
				275					280					285					
Thr	Lys	His	Asp																

<210> 125

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 125

gcaatgaact gggagctgc 19

<210> 126

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 126

ctgtgaatag catcctggg 19

<210> 127

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 127

cttttcaagc cactggaggg 20

<210> 128

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 128

ctgtagacat ccaagctggg atcc 24

<210> 129

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 129

aagagtctgc atccacacca ctc 23

<210> 130

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 130

acctgacgct actatgggcc gagtggcagg gacgacgccc agaattg 46

<210> 131

<211> 2365

<212> DNA

<213> Homo sapiens

<400> 131



gcgacgtggg caccgccatc agctgttgcg gcgtcttctc ctccaggtgg 50  
 ggaggggtt tcgggctggt ggagcatgtg ctgggacagg acagcatcct 100  
 caatcaatcc aacagcatat tcggttgcat cttctacaca ctacagctat 150  
 tgtaggttg cctgcggaca cgctgggcct ctgtcctgat gctgctgagc 200  
 tccctggtgt ctctcgctgg ttctgtctac ctggcctgga tcctgttctt 250  
 cgtgctctat gattttctgca ttgtttgtat caccacctat gctatcaacg 300  
 tgagcctgat gtggctcagt ttccggaagg tccaagaacc ccagggaag 350  
 gctaagaggc actgagccct caacccaagc caggctgacc tcatctgctt 400  
 tgctttggtc ttcaagccgc tcagcgtgcc tgtggacagc gtggccccgg 450  
 ccccccaag cctcaggagg gcaacacagt ccctggcgag tggccctggc 500  
 aggcagtggt gaggaggcaa ggagcccaca tctgcagcgg ctccctggtg 550  
 gcagacacct gggtcctcac tgctgcccac tgctttgaaa aggcagcagc 600  
 aacagaactg aattcctggt cagtggctcct gggttctctg cagcgtgagg 650  
 gactcagccc tggggccgaa gaggtggggg tggtgcctt gcagttgcc 700  
 agggcctata accactacag ccagggtcca gacctggccc tgctgcagct 750  
 cggccacccc acgaccaca caccctctg cctgccccag cccgccatc 800  
 gcttccccct tggagcctcc tgctgggcca ctggctggga tcaggacacc 850  
 agtgatgctc ctgggacctc acgcaatctg cgctgcgtc tcatcagtcg 900  
 ccccatgt aactgtatct acaaccagct gcaccagcga cacctgtcca 950  
 accggccccg gcctgggatg ctatgtgggg gcccccagcc tggggtgcag 1000  
 ggcccctgtc agggagattc cgggggccct gtgctgtgcc tcagaccta 1050  
 cggacactgg gttcaggctg gcatcatcag ctttgcatca agctgtgcc 1100  
 aggaggacgc tcctgtgctg ctgaccaaca cagctgctca cagttcctgg 1150  
 ctgcaggctc gaggtcaggg ggcagcttct ctggcccaga gccagagac 1200  
 cccggagatg agtgatgagg acagctgtgt agcctgtgga tccttgagga 1250  
 cagcaggtcc ccaggcagga gcaccctccc catggccctg ggaggccagg 1300  
 ctgatgcacc agggacagct ggcctgtggc ggagccctgg tgtcagagga 1350  
 ggcggtgcta actgctgcc actgcttcat tgggcgccag gccccagagg 1400  
 aatggagcgt agggctgggg accagaccgg aggagtgggg cctgaagcag 1450

ctcatcctgc atggagccta caccaccct gaggggggct acgacatggc 1500  
 cctcctgctg ctggcccagc ctgtgacact gggagccagc ctgcggcccc 1550  
 tctgcctgcc ctatcctgac caccacctgc ctgatgggga gcgtggctgg 1600  
 gttctgggac gggcccgcgc aggagcaggc atcagctccc tccagacagt 1650  
 gcccgtgacc ctctggggc ctagggcctg cagccggctg catgcagctc 1700  
 ctgggggtga tggcagccct attctgccgg ggatggtgtg taccagtgt 1750  
 gtgggtgagc tgcccagctg tgagggcctg tctggggcac cactggtgca 1800  
 tgaggtgagg ggcacatggt tctggccgg gctgcacagc ttcggagatg 1850  
 cttgccaagg ccccgccagg ccggcgggtct tcaccgcgct ccctgcctat 1900  
 gaggactggg tcagcagttt ggactggcag gtctacttcg ccgaggaacc 1950  
 agagcccag gctgagcctg gaagctgcct ggccaacata agccaaccaa 2000  
 ccagctgctg acaggggacc tggccattct caggacaaga gaatgcaggc 2050  
 agggcaatgg cattactgcc cctgtcctcc ccaccctgtc atgtgtgatt 2100  
 ccaggcacca gggcaggccc agaagcccag cagctgtggg aaggaacctg 2150  
 cctggggcca caggtgcca ctccccaccc tgcaggacag ggggtgtctgt 2200  
 ggacactccc acacccaact ctgctaccaa gcaggcgtct cagctttcct 2250  
 cctcctttac tctttcagat acaatcacgc cagccacgtt gttttgaaaa 2300  
 tttctttttt tggggggcag cagttttcct ttttttaaac ttaaataaat 2350  
 tgttacaaaa taaaa 2365

<210> 132

<211> 571

<212> PRT

<213> Homo sapiens

<400> 132

Met	Leu	Leu	Ser	Ser	Leu	Val	Ser	Leu	Ala	Gly	Ser	Val	Tyr	Leu
1				5					10					15
Ala	Trp	Ile	Leu	Phe	Phe	Val	Leu	Tyr	Asp	Phe	Cys	Ile	Val	Cys
				20					25					30
Ile	Thr	Thr	Tyr	Ala	Ile	Asn	Val	Ser	Leu	Met	Trp	Leu	Ser	Phe
				35					40					45
Arg	Lys	Val	Gln	Glu	Pro	Gln	Gly	Lys	Ala	Lys	Arg	His	Gly	Asn
				50					55					60
Thr	Val	Pro	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Val	Arg	Arg	Gln
				65					70					75

Gly	Ala	His	Ile	Cys	Ser	Gly	Ser	Leu	Val	Ala	Asp	Thr	Trp	Val	
				80					85					90	
Leu	Thr	Ala	Ala	His	Cys	Phe	Glu	Lys	Ala	Ala	Ala	Thr	Glu	Leu	
				95					100					105	
Asn	Ser	Trp	Ser	Val	Val	Leu	Gly	Ser	Leu	Gln	Arg	Glu	Gly	Leu	
				110					115					120	
Ser	Pro	Gly	Ala	Glu	Glu	Val	Gly	Val	Ala	Ala	Leu	Gln	Leu	Pro	
				125					130					135	
Arg	Ala	Tyr	Asn	His	Tyr	Ser	Gln	Gly	Ser	Asp	Leu	Ala	Leu	Leu	
				140					145					150	
Gln	Leu	Ala	His	Pro	Thr	Thr	His	Thr	Pro	Leu	Cys	Leu	Pro	Gln	
				155					160					165	
Pro	Ala	His	Arg	Phe	Pro	Phe	Gly	Ala	Ser	Cys	Trp	Ala	Thr	Gly	
				170					175					180	
Trp	Asp	Gln	Asp	Thr	Ser	Asp	Ala	Pro	Gly	Thr	Leu	Arg	Asn	Leu	
				185					190					195	
Arg	Leu	Arg	Leu	Ile	Ser	Arg	Pro	Thr	Cys	Asn	Cys	Ile	Tyr	Asn	
				200					205					210	
Gln	Leu	His	Gln	Arg	His	Leu	Ser	Asn	Pro	Ala	Arg	Pro	Gly	Met	
				215					220					225	
Leu	Cys	Gly	Gly	Pro	Gln	Pro	Gly	Val	Gln	Gly	Pro	Cys	Gln	Gly	
				230					235					240	
Asp	Ser	Gly	Gly	Pro	Val	Leu	Cys	Leu	Glu	Pro	Asp	Gly	His	Trp	
				245					250					255	
Val	Gln	Ala	Gly	Ile	Ile	Ser	Phe	Ala	Ser	Ser	Cys	Ala	Gln	Glu	
				260					265					270	
Asp	Ala	Pro	Val	Leu	Leu	Thr	Asn	Thr	Ala	Ala	His	Ser	Ser	Trp	
				275					280					285	
Leu	Gln	Ala	Arg	Val	Gln	Gly	Ala	Ala	Phe	Leu	Ala	Gln	Ser	Pro	
				290					295					300	
Glu	Thr	Pro	Glu	Met	Ser	Asp	Glu	Asp	Ser	Cys	Val	Ala	Cys	Gly	
				305					310					315	
Ser	Leu	Arg	Thr	Ala	Gly	Pro	Gln	Ala	Gly	Ala	Pro	Ser	Pro	Trp	
				320					325					330	
Pro	Trp	Glu	Ala	Arg	Leu	Met	His	Gln	Gly	Gln	Leu	Ala	Cys	Gly	
				335					340					345	
Gly	Ala	Leu	Val	Ser	Glu	Glu	Ala	Val	Leu	Thr	Ala	Ala	His	Cys	
				350					355					360	
Phe	Ile	Gly	Arg	Gln	Ala	Pro	Glu	Glu	Trp	Ser	Val	Gly	Leu	Gly	



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 134

gtgggcagca gttagcaccg cctc 24

<210> 135

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 135

ggctggcatc atcagctttg catcaagctg tgcccaggag gacgc 45

<210> 136

<211> 1998

<212> DNA

<213> Homo sapiens

<400> 136

cgggccgccc cgggccccca ttggggccgg gcctcgctgc ggcggcgact 50  
gagccaggct gggccgcgtc cctgagtccc agagtcggcg cggcgcgga 100  
ggggcagcct tccaccacgg ggagcccagc tgtcagccgc ctcacaggaa 150  
gatgctgcgt cggcggggca gccctggcat ggggtgtgcat gtgggtgcag 200  
ccctgggagc actgtggttc tgcctcacag gagccctgga ggtccaggtc 250  
cctgaagacc cagtgggtggc actggtgggc accgatgcca ccctgtgctg 300  
ctccttctcc cctgagcctg gcttcagcct ggcacagctc aacctcatct 350  
ggcagctgac agatacaaaa cagctggtgc acagctttgc tgagggccag 400  
gaccagggca gcgcctatgc caaccgcacg gccctcttcc cggacctgct 450  
ggcacagggc aacgcattcc tgaggctgca gcgcgtgcgt gtggcggacg 500  
agggcagctt cacctgcttc gtgagcatcc gggatttcgg cagcgctgcc 550  
gtcagcctgc aggtggccgc tccctactcg aagcccagca tgacctgga 600  
gccaacaag gacctgcggc caggggacac ggtgaccatc acgtgctcca 650  
gctaccaggg ctacctgag gctgaggtgt tctggcagga tgggcagggt 700  
gtgcccctga ctggcaacgt gaccacgtcg cagatggcca acgagcaggg 750  
cttgtttgat gtgcacagcg tctgcggggt ggtgctgggt gcgaatggca 800  
cctacagctg cctggtgcgc aaccccgctg tgcagcagga tgcgcacrgc 850

tctgtcacca tcacagggca gcctatgaca ttccccccag aggcacctgtg 900  
ggtagaccgtg gggctgtctg tctgtctcat tgcactgctg gtggccctgg 950  
ctttcgtgtg ctggagaaaag atcaaacaga gctgtgagga ggagaatgca 1000  
ggagctgagg accaggatgg ggagggagaa ggctccaaga cagccctgca 1050  
gcctctgaaa cactctgaca gcaaagaaga tgatggacaa gaaatagcct 1100  
gaccatgagg accagggagc tgctaccctt ccctacagct cctaccctct 1150  
ggctgcaatg gggctgcaact gtgagccctg cccccaacag atgcatcctg 1200  
ctctgacagg tgggctcctt ctccaaagga tgcgatacac agaccactgt 1250  
gcagccttat ttctccaatg gacatgattc ccaagtcac ctgctgcctt 1300  
ttttcttata gacacaatga acagaccacc cacaacctta gttctctaag 1350  
tcacctgcc tgctgcctta ttccacagta catacatttc ttagggacac 1400  
agtaactga ccacatcacc accctcttct tccagtgtg cgtggaccat 1450  
ctggctgcct tttttctcca aaagatgcaa tattcagact gactgacccc 1500  
ctgccttatt tcaccaaaga cagcatgcat agtcaccccg gccttgtttc 1550  
tccaatggcc gtgatacaact agtgatcatg ttcagccctg cttccacctg 1600  
catagaatct tttttctcca gacagggaca gtgcggcctc aacatctcct 1650  
ggagtctaga agctgtttcc tttccctcc ttcctccctg cccaagtga 1700  
agacagggca gggccaggaa tgctttgggg acaccgagg gactgcccc 1750  
caccaccacc atggtgctat tctggggctg gggcagtctt ttcctggctt 1800  
gcctctggcc agctcctggc ctctggtaga gtgagacttc agacgttctg 1850  
atgccttccg gatgtcatct ctccctgcc caggaatgga agatgtgagg 1900  
acttctaatt taaatgtggg actcggaggg attttgtaaa ctgggggtat 1950  
attttgggga aaataaatgt ctttgtaaaa aaaaaaaaaa aaaaaaaa 1998

<210> 137

<211> 316

<212> PRT

<213> Homo sapiens

<220>

<221> unsure

<222> 233

<223> unknown amino acid

<400> 137

Met Leu Arg Arg Arg Gly Ser Pro Gly Met Gly Val His Val Gly

1	5	10	15
Ala Ala Leu Gly	Ala Leu Trp Phe Cys	Leu Thr Gly Ala Leu	Glu
20		25	30
Val Gln Val Pro	Glu Asp Pro Val Val	Ala Leu Val Gly Thr	Asp
35		40	45
Ala Thr Leu Cys	Cys Ser Phe Ser Pro	Glu Pro Gly Phe Ser	Leu
50		55	60
Ala Gln Leu Asn	Leu Ile Trp Gln Leu	Thr Asp Thr Lys Gln	Leu
65		70	75
Val His Ser Phe	Ala Glu Gly Gln Asp	Gln Gly Ser Ala Tyr	Ala
80		85	90
Asn Arg Thr Ala	Leu Phe Pro Asp Leu	Leu Ala Gln Gly Asn	Ala
95		100	105
Ser Leu Arg Leu	Gln Arg Val Arg Val	Ala Asp Glu Gly Ser	Phe
110		115	120
Thr Cys Phe Val	Ser Ile Arg Asp Phe	Gly Ser Ala Ala Val	Ser
125		130	135
Leu Gln Val Ala	Ala Pro Tyr Ser Lys	Pro Ser Met Thr Leu	Glu
140		145	150
Pro Asn Lys Asp	Leu Arg Pro Gly Asp	Thr Val Thr Ile Thr	Cys
155		160	165
Ser Ser Tyr Gln	Gly Tyr Pro Glu Ala	Glu Val Phe Trp Gln	Asp
170		175	180
Gly Gln Gly Val	Pro Leu Thr Gly Asn	Val Thr Thr Ser Gln	Met
185		190	195
Ala Asn Glu Gln	Gly Leu Phe Asp Val	His Ser Val Leu Arg	Val
200		205	210
Val Leu Gly Ala	Asn Gly Thr Tyr Ser	Cys Leu Val Arg Asn	Pro
215		220	225
Val Leu Gln Gln	Asp Ala His Xaa Ser	Val Thr Ile Thr Gly	Gln
230		235	240
Pro Met Thr Phe	Pro Pro Glu Ala Leu	Trp Val Thr Val Gly	Leu
245		250	255
Ser Val Cys Leu	Ile Ala Leu Leu Val	Ala Leu Ala Phe Val	Cys
260		265	270
Trp Arg Lys Ile	Lys Gln Ser Cys Glu	Glu Glu Asn Ala Gly	Ala
275		280	285
Glu Asp Gln Asp	Gly Glu Gly Glu Gly	Ser Lys Thr Ala Leu	Gln
290		295	300

Pro Leu Lys His Ser Asp Ser Lys Glu Asp Asp Gly Gln Glu Ile  
305 310 315

Ala

<210> 138

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 138

ctggcacagc tcaacctcat ctgg 24

<210> 139

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 139

gctgtctgtc tgtctcattg 20

<210> 140

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 140

ggacacagta tactgaccac 20

<210> 141

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 141

tgccaaccag gcagctgtaa gtgc 24

<210> 142

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 142  
tggaagaaga ggggtggtgat gtgg 24

<210> 143

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 143

cagctgacag acaccaaaca gctggtgcac agtttcaccg aaggc 45

<210> 144

<211> 2336

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 1620, 1673

<223> unknown base

<400> 144

ttcgtgaccc ttgagaaaag agttggtggt aaatgtgcc cgtcttctaa 50  
gaagggggag tcttgaactt gtctgaagcc cttgtccgta agccttgaac 100  
tacgttctta aatctatgaa gtcgaggag ctttcgctgc tttttagagg 150  
acttctttcc ttgcttcagc aacatgaggc ttttcttgtg gaacgcggtc 200  
ttgactctgt tcgtcacttc tttgattggg gctttgatcc ctgaaccaga 250  
agtgaaaatt gaagttctcc agaagccatt catctgccat cgcaagacca 300  
aaggagggga tttgatgttg gtccactatg aaggctactt agaaaaggac 350  
ggctccttat ttcactccac tcacaaacat aacaatggtc agcccatttg 400  
gtttaccctg ggcacccctg aggtctctcaa aggttgggac cagggccttg 450  
aaggaatgtg tgtaggagag aagagaaagc tcattcattcc tctgtctctg 500  
ggctatggaa aagaaggaaa aggtaaaatt cccccagaaa gtacactgat 550  
atttaaatatt gatctcctgg agattcgaaa tggaccaaga tcccatgaat 600  
cattccaaga aatggatctt aatgatgact ggaaactctc taaagatgag 650  
gttaaagcat atttaaagaa ggagtttgaa aaacatggtg cgggtggtgaa 700  
tgaaagtcac catgatgctt tgggtggagga tttttttgat aaagaagatg 750  
aagacaaaga tgggtttata tctgccagag aatttacata taaacacgat 800  
gagttataga gatacatcta cctttttaat atagcactca tctttcaaga 850

gagggcagtc atctttaag aacattttat tttatacaa tgttctttct 900  
tgctttgttt tttattttta tatatttttt ctgactccta tttaaagaac 950  
cccttaggtt tctaagtacc catttctttc tgataagtta ttgggaagaa 1000  
aaagctaatt ggtctttgaa tagaagactt ctggacaatt tttcactttc 1050  
acagatatga agctttgttt tacttttctca cttataaatt taaaatgttg 1100  
caactgggaa tataaccacga catgagacca ggttatagca caaattagca 1150  
ccctatattt ctgcttcctt ctattttctc caagttagag gtcaacattt 1200  
gaaaagcctt ttgcaatagc ccaaggcttg ctattttcat gttataatga 1250  
aatagtttat gtgtaactgg ctctgagtct ctgcttgagg accagaggaa 1300  
aatggttggt ggacctgact tgttaatggc tactgcttta ctaaggagat 1350  
gtgcaatgct gaagttagaa acaagggtta tagccaggca tgggtggtca 1400  
tgctgtaat ccagcactt tgggaggctg aggcgggagg atcacctgag 1450  
gttgggagtt cgagaccagc ctgaccaaca cggagaaacc ctatctctac 1500  
taaaaataca aagtagcccg gcgtggtgat gcgtgcctgt aatcccagct 1550  
accaggaag gctgaggcgg cagaatcact tgaacccgag gccgaggttg 1600  
cggtaaagcg agatcacctn cagcctggac actctgtctc gaaaaaagaa 1650  
aagaacacgg ttaataccat atnaatatgt atgcattgag acatgctacc 1700  
taggacttaa gctgatgaag cttggctcct agtgattggt ggcctattat 1750  
gataaatagg acaaatcatt tatgtgtgag tttctttgta ataaaatgta 1800  
tcaatatggt atagatgagg tagaaagtta tatttatatt caatatttac 1850  
ttcttaaggg tagcggaaata tccttcctgg ttctttaatg ggtagtctat 1900  
agtatattat actacaataa cattgtatca taagataaag tagtaaacca 1950  
gtctacattt tccattttct gtctcatcaa aaactgaagt tagctgggtg 2000  
tgggtggtca tgctgtaat ccagcactt tgggggccaa ggagggtgga 2050  
tcacttgaga tcaggagttc aagaccagcc tggccaacat ggtgaaacct 2100  
tgtctctact aaaaatacaa aaattagcca ggcgtggtgg tgcacacctg 2150  
tagtcccagc tactcgggag gctgagacag gagatttgct tgaacccggg 2200  
aggcggaggt tgcagtgagc caagattgtg ccaactgcact ccagcctggg 2250  
tgacagagca agactccatc tcaaaaaaaa aaaaaagaag cagacctaca 2300

gcagctacta ttgaataaat acctatcctg gattttt 2336

<210> 145

<211> 211

<212> PRT

<213> Homo sapiens

<400> 145

Met	Arg	Leu	Phe	Leu	Trp	Asn	Ala	Val	Leu	Thr	Leu	Phe	Val	Thr
1				5					10					15
Ser	Leu	Ile	Gly	Ala	Leu	Ile	Pro	Glu	Pro	Glu	Val	Lys	Ile	Glu
				20					25					30
Val	Leu	Gln	Lys	Pro	Phe	Ile	Cys	His	Arg	Lys	Thr	Lys	Gly	Gly
				35					40					45
Asp	Leu	Met	Leu	Val	His	Tyr	Glu	Gly	Tyr	Leu	Glu	Lys	Asp	Gly
				50					55					60
Ser	Leu	Phe	His	Ser	Thr	His	Lys	His	Asn	Asn	Gly	Gln	Pro	Ile
				65					70					75
Trp	Phe	Thr	Leu	Gly	Ile	Leu	Glu	Ala	Leu	Lys	Gly	Trp	Asp	Gln
				80					85					90
Gly	Leu	Lys	Gly	Met	Cys	Val	Gly	Glu	Lys	Arg	Lys	Leu	Ile	Ile
				95					100					105
Pro	Pro	Ala	Leu	Gly	Tyr	Gly	Lys	Glu	Gly	Lys	Gly	Lys	Ile	Pro
				110					115					120
Pro	Glu	Ser	Thr	Leu	Ile	Phe	Asn	Ile	Asp	Leu	Leu	Glu	Ile	Arg
				125					130					135
Asn	Gly	Pro	Arg	Ser	His	Glu	Ser	Phe	Gln	Glu	Met	Asp	Leu	Asn
				140					145					150
Asp	Asp	Trp	Lys	Leu	Ser	Lys	Asp	Glu	Val	Lys	Ala	Tyr	Leu	Lys
				155					160					165
Lys	Glu	Phe	Glu	Lys	His	Gly	Ala	Val	Val	Asn	Glu	Ser	His	His
				170					175					180
Asp	Ala	Leu	Val	Glu	Asp	Ile	Phe	Asp	Lys	Glu	Asp	Glu	Asp	Lys
				185					190					195
Asp	Gly	Phe	Ile	Ser	Ala	Arg	Glu	Phe	Thr	Tyr	Lys	His	Asp	Glu
				200					205					210

Leu

<210> 146

<211> 26

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 146  
ctttccttgc ttcagcaaca tgaggc 26

<210> 147  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 147  
gcccagagca ggaggaatga tgagc 25

<210> 148  
<211> 49  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 148  
gtggaacgcg gtcttgactc tgttcgctcac ttctttgatt ggggctttg 49

<210> 149  
<211> 2196  
<212> DNA  
<213> Homo sapiens

<400> 149  
aataaagctt ccttaatggt gtatatgtct ttgaagtaca tccgtgcatt 50  
tttttttagc atccaaccat tcctcccttg tagttctcgc cccctcaaatt 100  
caccctctcc cgtagccac cgcactaaca tctcagtctc tgaaaatgca 150  
cagagatgcc tggctacctc gccctgcctt cagcctcacg gggctcagtc 200  
tctttttctc tttggtgcc aaggacgga gcatggaggt cacagtacct 250  
gccaccctca acgtcctcaa tggctctgac gccgcctgc cctgcacctt 300  
caactcctgc tacacagtga accacaaaca gttctccctg aactggactt 350  
accaggagtg caacaactgc tctgaggaga tggtcctcca gttccgcatg 400  
aagatcatta acctgaagct ggagcgggtt caagaccgag tggagttctc 450  
agggaacccc agcaagtacg atgtgtcggg gatgctgaga aacgtgcagc 500  
cggaggatga ggggatttac aactgctaca tcatgaacct ccctgaccgc 550  
caccgtggcc atggcaagat ccatctgcag gtcctcatgg aagagcccc 600

tgagcgggac tccacggtgg ccgtgattgt gggcgcctcc gtcgggggct 650  
 tcctggctgt ggtcatcttg gtgctgatgg tggcaagtgt tgtgaggaga 700  
 aaaaaagagc agaagctgag cacagatgac ctgaagaccg aggaggaggg 750  
 caagacggac ggtgaaggca acccgatga tggcgccaag tagtgggtgg 800  
 ccggccctgc agcctcccgt gtcccgtctc ctcccctctc cgccctgtac 850  
 agtgaccctg cctgctcgct cttggtgtgc ttcccgtgac ctaggacccc 900  
 agggcccacc tggggcctcc tgaacccccg acttcgtatc tcccaccctg 950  
 caccaagagt gaccactct cttccatccg agaaacctgc catgctctgg 1000  
 gacgtgtggg ccctggggag aggagagaaa gggctccac ctgccagtcc 1050  
 ctggggggag gcaggaggca catgtgaggg tcccagaga gaaggagtg 1100  
 ggtgggcagg ggtagaggag gggccgtgt cacctgcca gtgcttcct 1150  
 ggcagtggct tcagagagga cctggtgggg agggagggt ttcctgtgct 1200  
 gacagcgctc cctcaggagg gccttggcct ggcacggctg tgctcctccc 1250  
 ctgctcccag ccagagcag ccatcaggct ggaggtgacg atgagttcct 1300  
 gaaacttga ggggcatgtt aaagggatga ctgtgcattc cagggcactg 1350  
 acggaaagcc agggctgcag gcaaagctgg acatgtgcc tggcccagga 1400  
 ggccatgttg ggccctogtt tccattgcta gtggcctcct tggggctcct 1450  
 gttggctcct aatcccttag gactgtggat gaggccagac tggaagagca 1500  
 gctccaggta gggggccatg tttcccagcg gggaccacc aacagaggcc 1550  
 agtttcaaag tcagctgagg ggctgagggg tggggctcca tggatgaatgc 1600  
 aggttgctgc aggtctgccc ttctccatgg ggtaaccacc ctgcctggg 1650  
 caggggcagc caaggctggg aaatgaggag gccatgcaca gggggggca 1700  
 gctttctttg gggcttcagt gagaactctc ccagttgcc ttggtgggg 1750  
 ttccacctgg cttttggcta cagagaggga agggaaagcc tgaggccggc 1800  
 ataaggggag gccttgaac ctgagctgcc aatgccagcc ctgtcccatc 1850  
 tgcgccacg ctactcgctc ctctcccaac aactcccttc gtggggacaa 1900  
 aagtgacaat tgtaggccag gcacagtggc tcacgctgt aatcccagca 1950  
 ctttgggagg ccaaggcggg tggattacct ccatctgttt agtagaaatg 2000  
 ggcaaaacc catctctact aaaaatacaa gaattagctg ggcgtgggtg 2050

cgtgtgcctg taatcccagc tatttgggag gctgaggcag gagaatcgct 2100  
 tgagccccggg aagcagaggt tgcagtgaac tgagatagtg atagtgccac 2150  
 tgcaattcag cctgggtgac atagagagac tccatctcaa aaaaaa 2196

<210> 150  
 <211> 215  
 <212> PRT  
 <213> Homo sapiens

<400> 150

Met	His	Arg	Asp	Ala	Trp	Leu	Pro	Arg	Pro	Ala	Phe	Ser	Leu	Thr	1	5	10	15
Gly	Leu	Ser	Leu	Phe	Phe	Ser	Leu	Val	Pro	Pro	Gly	Arg	Ser	Met	20	25	30	
Glu	Val	Thr	Val	Pro	Ala	Thr	Leu	Asn	Val	Leu	Asn	Gly	Ser	Asp	35	40	45	
Ala	Arg	Leu	Pro	Cys	Thr	Phe	Asn	Ser	Cys	Tyr	Thr	Val	Asn	His	50	55	60	
Lys	Gln	Phe	Ser	Leu	Asn	Trp	Thr	Tyr	Gln	Glu	Cys	Asn	Asn	Cys	65	70	75	
Ser	Glu	Glu	Met	Phe	Leu	Gln	Phe	Arg	Met	Lys	Ile	Ile	Asn	Leu	80	85	90	
Lys	Leu	Glu	Arg	Phe	Gln	Asp	Arg	Val	Glu	Phe	Ser	Gly	Asn	Pro	95	100	105	
Ser	Lys	Tyr	Asp	Val	Ser	Val	Met	Leu	Arg	Asn	Val	Gln	Pro	Glu	110	115	120	
Asp	Glu	Gly	Ile	Tyr	Asn	Cys	Tyr	Ile	Met	Asn	Pro	Pro	Asp	Arg	125	130	135	
His	Arg	Gly	His	Gly	Lys	Ile	His	Leu	Gln	Val	Leu	Met	Glu	Glu	140	145	150	
Pro	Pro	Glu	Arg	Asp	Ser	Thr	Val	Ala	Val	Ile	Val	Gly	Ala	Ser	155	160	165	
Val	Gly	Gly	Phe	Leu	Ala	Val	Val	Ile	Leu	Val	Leu	Met	Val	Val	170	175	180	
Lys	Cys	Val	Arg	Arg	Lys	Lys	Glu	Gln	Lys	Leu	Ser	Thr	Asp	Asp	185	190	195	
Leu	Lys	Thr	Glu	Glu	Glu	Gly	Lys	Thr	Asp	Gly	Glu	Gly	Asn	Pro	200	205	210	
Asp	Asp	Gly	Ala	Lys	215													

<210> 151

<211> 524  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 103, 233  
<223> unknown base

<400> 151  
gttgatatg tcctgaagta catccgtgca ttttttttag catccaacca 50  
tcctcccttg tagttctcgc ccctcaaat caccttctcc cttagcccac 100  
ccnactaaca tctcagtctc tgaaaatgca cagagatgcc tggctacctc 150  
gccctgcctt cagcctcagc gggctcagtc tctttttctc tttggtgcca 200  
ccaggacgga gcatggaggt ccacagtacc tgnccaccct caacgtcctc 250  
aatggctctg acgcccgcct gccctgccct tcaactcctg ctacacagtg 300  
aaccacaaac agttctccct gaactggact taccaggagt gcaacaactg 350  
ctctgaggag atgttcctcc agttccgcat gaagatcatt aacctgaagc 400  
tggagcgggt tcaagaccgc gtggagttct caggaaccc cagcaagtac 450  
gatgtgtcgg tgatgctgag aaacgtgcag ccggaggatg aggggattta 500  
caactgctac atcatgaacc cccc 524

<210> 152  
<211> 368  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 56, 123  
<223> unknown base

<400> 152  
tcacggggct catctctttt tctctttggt gccaccagg acggagcatg 50  
gaggtncaca tacctgccac cctcaacgct ctcaatggct ttgacgcccg 100  
cctgccctgc accttcaact ccngctacac agtgaaccac aaacagttct 150  
ccctgaactg gatattaccag gagtgaaca actggctctg aggagatgtt 200  
cctccagttc ccgcatggaa gatcatttaa cctgaaagct ggaagcgggt 250  
ttcaagaacc gcgtggaagt ttctcagga accccagcaa gtacgatgtg 300  
tcgggtgatgc tgagaaacgt gcagccggag gatgagggga tttacaactg 350  
ctacatcatg aaccccc 368

<210> 153  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 153  
acggagcatg gaggtocaca gtac 24

<210> 154  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 154  
gcacgtttct cagcatcacc gac 23

<210> 155  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 155  
cgcctgccct gcaccttcaa ctctgtctac acagtgaacc acaaacagtt 50

<210> 156  
<211> 2680  
<212> DNA  
<213> Homo sapiens

<400> 156  
tgcggcgacc gtcgtacacc atgggcctcc acctccgccc ctaccgtgtg 50  
gggctgctcc cggatggcct cctgttcttc ttgctgctgc taatgctgct 100  
cgcggaccca gcgctcccg cggacgtca cccccagtg gtgctggtcc 150  
ctggtgattt gggtaaccaa ctggaagcca agctggacaa gccgacagtg 200  
gtgcactacc tctgtcccaa gaagaccgaa agctacttca caatctggct 250  
gaacctggaa ctgctgctgc ctgtcatcat tgactgctgg attgacaata 300  
tcaggctggt ttacaacaaa acatccaggg ccacccagtt tctgatggt 350  
gtggatgtac gtgtccctgg ctttggaag accttctcac tggagttcct 400  
ggaccccagc aaaagcagcg tgggttcta ttccacacc atgggtggaga 450  
gccttggtgg ctggggctac acacggggtg aggatgtccg aggggctccc 500



tatgactggc gccgagcccc aaatgaaaac gggccctact tcctggccct 550  
 ccgcgagatg atcgaggaga tgtaccagct gtatgggggc cccgtggtgc 600  
 tggttgccca cagtatgggc aacatgtaca cgctctactt tctgcagcgg 650  
 cagccgcagg cctggaagga caagtatata cgggccttcg tgtcactggg 700  
 tgcgccctgg gggggcgtgg ccaagaccct gcgcgtcctg gcttcaggag 750  
 acaacaaccg gatcccagtc atcgggcccc tgaagatccg ggagcagcag 800  
 cggtcagctg tctccaccag ctggctgctg ccctacaact acacatggtc 850  
 acctgagaag gtgttcgtgc agacacccac aatcaactac aactgcggg 900  
 actaccgcaa gttcttcag gacatcggct ttgaagatgg ctggctcatg 950  
 cggcaggaca cagaagggt ggtggaagcc acgatgccac ctggcgtgca 1000  
 gctgcactgc ctctatggta ctggcgtccc cacaccagac tccttctact 1050  
 atgagagctt ccctgaccgt gaccctaaaa tctgctttgg tgacggcgat 1100  
 ggtactgtga acttgaagag tgccctgcag tgccaggcct ggcagagccg 1150  
 ccaggagcac caagtgttgc tgcaggagct gccaggcagc gagcacatcg 1200  
 agatgctggc caacgccacc accctggcct atctgaaacg tgtgtcctt 1250  
 gggccctgac tcctgtgcca caggactcct gtggctcggc cgtggacctg 1300  
 ctgttgccct ctggggctgt catggccac gcgttttgca aagtttgtga 1350  
 ctcaccattc aaggccccga gtcttgact gtgaagcatc tgccatgggg 1400  
 aagtgtgtt tgttatcctt tctctgtggc agtgaagaag gaagaaatga 1450  
 gagtctagac tcaagggaca ctggatggca agaagctgc tgatgggtga 1500  
 actgctgtga ccttaggact ggctccacag ggtggactgg ctgggccctg 1550  
 gtcccagtc ctgcctgggg ccatgtgtcc ccctattcct gtgggctttt 1600  
 catacttgcc tactgggccc tggccccgca gccttcctat gagggatgtt 1650  
 actgggctgt ggtcctgtac ccagaggctc cagggatcgg ctccctggccc 1700  
 ctggggtgac ccttcccaca caccagccac agataggcct gccactggtc 1750  
 atgggtagct agagctgctg gcttccctgt ggcttagctg gtggccagcc 1800  
 tgactggctt cctgggagag cctagtagct cctgcaggca ggggcagttt 1850  
 gttgogttct tcgtggttcc caggccctgg gacatctcac tccactccta 1900  
 cctcccttac caccaggagc attcaagctc tggattgggc agcagatgtg 1950

cccccagtcc cgcaggctgt gttccagggg ccctgatttc ctoggatgtg 2000  
 ctattggccc caggactgaa gctgcctccc ttcaccctgg gactgtggtt 2050  
 ccaaggatga gagcaggggt tggagccatg gccttctggg aacctatgga 2100  
 gaaagggaaat ccaaggaagc agccaaggct gctcgcagct tccctgagct 2150  
 gcacctcttg ctaacccac catcacactg ccaccctgcc ctaggggtctc 2200  
 actagtacca agtgggtcag cacagggctg aggatggggc tcctatccac 2250  
 cctggccagc acccagctta gtgctgggac tagcccagaa acttgaatgg 2300  
 gaccctgaga gagccagggg tcccctgagg cccccctagg ggctttctgt 2350  
 ctgccccagg gtgctccatg gatctccctg tggcagcagg catggagagt 2400  
 cagggtgcc ttcatggcag taggctctaa gtgggtgact ggccacaggc 2450  
 cgagaaaagg gtacagcctc taggtggggg tcccaaagac gccttcaggc 2500  
 tggactgagc tgctctccca cagggtttct gtgcagctgg attttctctg 2550  
 ttgcatacat gcctggcatc tgtctcccct tgttctgag tggccccaca 2600  
 tggggctctg agcaggctgt atctggattc tggcaataaa agtactctgg 2650  
 atgctgtaaa aaaaaaaaaa aaaaaaaaaa 2680

<210> 157

<211> 412

<212> PRT

<213> Artificial

<400> 157

Met	Gly	Leu	His	Leu	Arg	Pro	Tyr	Arg	Val	Gly	Leu	Leu	Pro	Asp
1				5					10					15

Gly	Leu	Leu	Phe	Leu	Leu	Leu	Leu	Leu	Met	Leu	Leu	Ala	Asp	Pro
			20						25					30

Ala	Leu	Pro	Ala	Gly	Arg	His	Pro	Pro	Val	Val	Leu	Val	Pro	Gly
			35						40					45

Asp	Leu	Gly	Asn	Gln	Leu	Glu	Ala	Lys	Leu	Asp	Lys	Pro	Thr	Val
			50						55					60

Val	His	Tyr	Leu	Cys	Ser	Lys	Lys	Thr	Glu	Ser	Tyr	Phe	Thr	Ile
			65						70					75

Trp	Leu	Asn	Leu	Glu	Leu	Leu	Leu	Pro	Val	Ile	Ile	Asp	Cys	Trp
			80						85					90

Ile	Asp	Asn	Ile	Arg	Leu	Val	Tyr	Asn	Lys	Thr	Ser	Arg	Ala	Thr
			95						100					105

Gln	Phe	Pro	Asp	Gly	Val	Asp	Val	Arg	Val	Pro	Gly	Phe	Gly	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

110	115	120
Thr Phe Ser Leu Glu Phe Leu Asp Pro Ser Lys Ser Ser Val Gly		
125	130	135
Ser Tyr Phe His Thr Met Val Glu Ser Leu Val Gly Trp Gly Tyr		
140	145	150
Thr Arg Gly Glu Asp Val Arg Gly Ala Pro Tyr Asp Trp Arg Arg		
155	160	165
Ala Pro Asn Glu Asn Gly Pro Tyr Phe Leu Ala Leu Arg Glu Met		
170	175	180
Ile Glu Glu Met Tyr Gln Leu Tyr Gly Gly Pro Val Val Leu Val		
185	190	195
Ala His Ser Met Gly Asn Met Tyr Thr Leu Tyr Phe Leu Gln Arg		
200	205	210
Gln Pro Gln Ala Trp Lys Asp Lys Tyr Ile Arg Ala Phe Val Ser		
215	220	225
Leu Gly Ala Pro Trp Gly Gly Val Ala Lys Thr Leu Arg Val Leu		
230	235	240
Ala Ser Gly Asp Asn Asn Arg Ile Pro Val Ile Gly Pro Leu Lys		
245	250	255
Ile Arg Glu Gln Gln Arg Ser Ala Val Ser Thr Ser Trp Leu Leu		
260	265	270
Pro Tyr Asn Tyr Thr Trp Ser Pro Glu Lys Val Phe Val Gln Thr		
275	280	285
Pro Thr Ile Asn Tyr Thr Leu Arg Asp Tyr Arg Lys Phe Phe Gln		
290	295	300
Asp Ile Gly Phe Glu Asp Gly Trp Leu Met Arg Gln Asp Thr Glu		
305	310	315
Gly Leu Val Glu Ala Thr Met Pro Pro Gly Val Gln Leu His Cys		
320	325	330
Leu Tyr Gly Thr Gly Val Pro Thr Pro Asp Ser Phe Tyr Tyr Glu		
335	340	345
Ser Phe Pro Asp Arg Asp Pro Lys Ile Cys Phe Gly Asp Gly Asp		
350	355	360
Gly Thr Val Asn Leu Lys Ser Ala Leu Gln Cys Gln Ala Trp Gln		
365	370	375
Ser Arg Gln Glu His Gln Val Leu Leu Gln Glu Leu Pro Gly Ser		
380	385	390
Glu His Ile Glu Met Leu Ala Asn Ala Thr Thr Leu Ala Tyr Leu		
395	400	405

Lys Arg Val Leu Leu Gly Pro  
410

<210> 158

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 158

ctggggctac acacggggtg agg 23

<210> 159

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 159

ggtgccgctg cagaaagtag agcg 24

<210> 160

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 160

gccccaaatg aaaacggggc ctacttcctg gccctccgcg agatg 45

<210> 161

<211> 1512

<212> DNA

<213> Homo sapiens

<400> 161

cggaacgctg ggcggacgcg tggggcgggc gcagcggcg cgacggcgac 50

atggagagcg gggcctacg cgcggccaa gcgggcggt ccttcgacct 100

goggcgttc ctgacgcagc cgcaggtggt ggcgcgcgcc gtgtgcttgg 150

tottgocctt gatcgtgttc tctgcatct atggtgaggg ctacagcaat 200

gcccacgagt ctaagcagat gtactgcgtg ttcaaccgca acgaggatgc 250

ctgcgcctat ggcagtgcca tcgggggtgct ggccttcctg gcctcggcct 300

tcttcttggg ggtcgacgcg tatttcccc agatcagcaa cgccactgac 350

cgcaagtacc tggtcattgg tgacctgctc ttctcagctc tctggacctt 400

cctgtggttt gttggtttct gcttctcac caaccagtgg gcagtcacca 450  
acccgaagga cgtgctggtg ggggccgact ctgtgagggc agccatcacc 500  
ttcagcttct tttccatctt ctctgggggt gtgctggcct ccctggccta 550  
ccagcgctac aaggctggcg tggacgactt catccagaat tacgttgacc 600  
ccactccgga ccccaacact gcctacgcct cctaccagg tgcatctgtg 650  
gacaactacc aacagccacc cttcaccag aacgcggaga ccaccgaggg 700  
ctaccagccg cccctgtgt actgagtggc ggttagcgtg ggaaggggga 750  
cagagagggc cctccctct gccctggact ttcccatcag cctcctggaa 800  
ctgccagccc ctctctttca cctgttccat cctgtgcagc tgacacacag 850  
ctaaggagcc tcatagcctg gcgggggctg gcagagccac accccaagt 900  
cctgtgcccga gagggttca gtcagccgt cactcctcca gggcactttt 950  
aggaaaggggt ttttagctag tgttttctt cgcttttaac gacctcagcc 1000  
ccgcctgcag tggctagaag ccagcaggtg cccatgtgct actgacaagt 1050  
gcctcagctt ccccccggcc cgggtcaggc cgtgggagcc gctattatct 1100  
gcgttctctg ccaaagactc gtgggggcca tcacacctgc cctgtgcagc 1150  
ggagccggac caggctcttg tgtctcact caggtttgct tcccctgtgc 1200  
ccactgctgt atgatctggg ggccaccacc ctgtgccggt ggcctctggg 1250  
ctgcctcccg tgggtgtagg gcggggctgg tgctcatggc acttctcct 1300  
tgctcccacc cctggcagca gggaagggct ttgcctgaca acaccagct 1350  
ttatgtaaat attctgcagt tgttacttag gaagcctggg gagggcaggg 1400  
gtgccccatg gctcccagac tctgtctgtg ccgagtgtat tataaaatcg 1450  
tgggggagat gccggcctg ggatgctgtt tggagacgga ataaatgttt 1500  
tctcattcaa ag 1512

<210> 162

<211> 224

<212> PRT

<213> Homo sapiens

<400> 162

Met	Glu	Ser	Gly	Ala	Tyr	Gly	Ala	Ala	Lys	Ala	Gly	Gly	Ser	Phe
1				5					10					15
Asp	Leu	Arg	Arg	Phe	Leu	Thr	Gln	Pro	Gln	Val	Val	Ala	Arg	Ala
				20					25					30

Val	Cys	Leu	Val	Phe	Ala	Leu	Ile	Val	Phe	Ser	Cys	Ile	Tyr	Gly	
				35					40					45	
Glu	Gly	Tyr	Ser	Asn	Ala	His	Glu	Ser	Lys	Gln	Met	Tyr	Cys	Val	
				50					55					60	
Phe	Asn	Arg	Asn	Glu	Asp	Ala	Cys	Arg	Tyr	Gly	Ser	Ala	Ile	Gly	
				65					70					75	
Val	Leu	Ala	Phe	Leu	Ala	Ser	Ala	Phe	Phe	Leu	Val	Val	Asp	Ala	
				80					85					90	
Tyr	Phe	Pro	Gln	Ile	Ser	Asn	Ala	Thr	Asp	Arg	Lys	Tyr	Leu	Val	
				95					100					105	
Ile	Gly	Asp	Leu	Leu	Phe	Ser	Ala	Leu	Trp	Thr	Phe	Leu	Trp	Phe	
				110					115					120	
Val	Gly	Phe	Cys	Phe	Leu	Thr	Asn	Gln	Trp	Ala	Val	Thr	Asn	Pro	
				125					130					135	
Lys	Asp	Val	Leu	Val	Gly	Ala	Asp	Ser	Val	Arg	Ala	Ala	Ile	Thr	
				140					145					150	
Phe	Ser	Phe	Phe	Ser	Ile	Phe	Ser	Trp	Gly	Val	Leu	Ala	Ser	Leu	
				155					160					165	
Ala	Tyr	Gln	Arg	Tyr	Lys	Ala	Gly	Val	Asp	Asp	Phe	Ile	Gln	Asn	
				170					175					180	
Tyr	Val	Asp	Pro	Thr	Pro	Asp	Pro	Asn	Thr	Ala	Tyr	Ala	Ser	Tyr	
				185					190					195	
Pro	Gly	Ala	Ser	Val	Asp	Asn	Tyr	Gln	Gln	Pro	Pro	Phe	Thr	Gln	
				200					205					210	
Asn	Ala	Glu	Thr	Thr	Glu	Gly	Tyr	Gln	Pro	Pro	Pro	Val	Tyr		
				215					220						

<210> 163

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 163

tggtcttcgc cttgatcgtg ttct 24

<210> 164

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 164  
gtgtactgag cggcgggttag 20

<210> 165

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 165

ctgaaggtga tggctgccct cac 23

<210> 166

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 166

ccaggaggct catgggaaag tcc 23

<210> 167

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 167

ccacgagtct aagcagatgt actgcgtggt caaccgcaac gaggatgcct 50

<210> 168

<211> 3143

<212> DNA

<213> Homo sapiens

<400> 168

gagccaccta ccctgctccg aggccaggcc tgcagggcct catcggccag 50

agggtgatca gtgagcagaa ggatgcccggt ggccgaggcc cccaggtgg 100

ctggcgggca gggggacgga ggtgatggcg aggaagcgga gccagagggg 150

atgttcaagg cctgtgagga ctccaagaga aaagcccggg gctacctccg 200

cctggtgccc ctgtttgtgc tgctggccct gctcgtgctg gcttcggcgg 250

gggtgctact ctggtatttc ctagggtaca aggcggaggt gatggtcagc 300

caggtgtact caggcagtct gcgtgtactc aatcgccact tctcccagga 350

tcttaccgcg cggaatcta gtgccttccg cagtgaacc gccaaagccc 400

agaagatgct caaggagctc atcaccagca cccgcctggg aacttactac 450  
 aactccagct ccgctctattc ctttggggag ggacccctca cctgcttctt 500  
 ctggttcatt ctccaaatcc ccgagcaccg ccggctgatg ctgagccccg 550  
 aggtggtgca ggcactgctg gtggaggagc tgctgtccac agtcaacagc 600  
 tcggctgccg tcccctacag ggccgagtac gaagtggacc ccgagggcct 650  
 agtgatcctg gaagccagtg tgaaagacat agctgcattg aattccacgc 700  
 tgggttgta cgcctacagc tacgtgggcc agggccaggt cctccggctg 750  
 aaggggcctg accacctggc ctccagctgc ctgtggcacc tgcagggccc 800  
 caaggacctc atgctcaaac tccggctgga gtggacgctg gcagagtgcc 850  
 gggaccgact ggccatgtat gacgtggccg ggcccctgga gaagaggctc 900  
 atcacctcgg tgtacggctg cagccgccag gagcccgtgg tggaggttct 950  
 ggcgtcgggg gccatcatgg cggctcgtctg gaagaagggc ctgcacagct 1000  
 actacgaccc ctctgtgctc tccgtgcagc cgggtggtctt ccaggcctgt 1050  
 gaagtgaacc tgacgtgga caacaggctc gactcccagg gcgtcctcag 1100  
 cccccgtac ttccccagct actactcgcc ccaaaccac tgctcctggc 1150  
 acctcacggt gccctctctg gaactacggct tggccctctg gtttgatgcc 1200  
 tatgcaactga ggaggcagaa gtatgatttg ccgtgcaccc agggccagt 1250  
 gacgatccag aacaggaggc tgtgtggctt gcgcacctc cagccctacg 1300  
 ccgagaggat ccccggtggt gccacggccg ggatcaccat caacttcacc 1350  
 tcccagatct ccctcacggg gcccggtgtg cgggtgcact atggcttgta 1400  
 caaccagtgc gacccctgcc ctggagagtt cctctgttct gtgaatggac 1450  
 totgtgtccc tgccgtgat ggggtcaagg actgccccaa cggcctggat 1500  
 gagagaaact gcgtttgcag agccacattc cagtgcaaag aggacagcac 1550  
 atgcatctca ctgccccagg tctgtgatgg gcagcctgat tgtctcaacg 1600  
 gcagcgatga agagcagtgc caggaagggg tgccatgtgg gacattcacc 1650  
 ttccagtgtg aggaccggag ctgcgtgaag aagcccaacc cgcagtgtga 1700  
 tgggcggccc gactgcaggg acggctcgga tgaggagcac tgtgactgtg 1750  
 gcctccaggg cccctocagc cgcattgttg gtggagctgt gtccctccag 1800  
 ggtgagtggc catggcaggc cagcctccag gttcggggtc gacacatctg 1850



tggggggggcc ctcatcgctg accgctgggt gataacagct gccactgct 1900  
 tccaggagga cagcatggcc tccacgggtgc tgtggaccgt gttcctgggc 1950  
 aaggtgtggc agaactcgcg ctggcctgga gaggtgtcct tcaaggtgag 2000  
 ccgcctgctc ctgcacccgt accacgaaga ggacagccat gactacgacg 2050  
 tggcgctgct gcagctcgac caccgggtgg tgcgctcggc cgccgtgcgc 2100  
 cccgtctgcc tgcccgcgcg ctcccacttc ttcgagcccg gcctgcaactg 2150  
 ctggattacg ggctggggcg ccttgcgcgga gggcgggccc atcagcaacg 2200  
 ctctgcagaa agtggatgtg cagttgatcc cacaggacct gtgcagcgag 2250  
 gcctatcgct accaggtgac gccacgcatg ctgtgtgccg gctaccgcaa 2300  
 gggcaagaag gatgcctgtc agggtgactc aggtgggtccg ctggtgtgca 2350  
 aggcaactcag tggccgctgg ttcttgccgg ggctgggtcag ctggggcctg 2400  
 ggctgtggcc ggcctaacta cttcggcgctc tacacccgca tcacaggtgt 2450  
 gatcagctgg atccagcaag tggtgacctg aggaactgcc cccctgcaaa 2500  
 gcaggggcca cctcctggac tcagagagcc cagggaact gccaaagcagg 2550  
 gggacaagta ttctggcggg ggggtggggga gagagcaggc cctgtggtgg 2600  
 caggaggtgg catcttgtct cgtccctgat gtctgtcca gtgatggcag 2650  
 gaggatggag aagtgccagc agctgggggt caagacgtcc cctgaggacc 2700  
 caggcccaca cccagccctt ctgcctccca attctctctc ctccgtcccc 2750  
 ttctccact gctgcctaata gcaaggcagt ggctcagcag caagaatgct 2800  
 ggttctacat cccgaggagt gtctgaggtg cgccccactc tgtacagagg 2850  
 ctgtttgggc agccttgctt ccagagagca gattccagct tcggaagccc 2900  
 ctggttctaac ttgggatctg ggaatggaag gtgctcccat cggaggggac 2950  
 cctcagagcc ctggagactg ccaggtgggc ctgctgccac tgtaagccaa 3000  
 aaggtgggga agtctgact ccagggtcct tgccccacc ctgcctgcca 3050  
 cctgggcccct cacagcccag accctcactg ggaggtgagc tcagctgccc 3100  
 tttgaataa agctgcctga tcaaaaaaaaa aaaaaaaaaa aaa 3143

<210> 169

<211> 802

<212> PRT

<213> Homo sapiens

<400> 169

Met	Pro	Val	Ala	Glu	Ala	Pro	Gln	Val	Ala	Gly	Gly	Gln	Gly	Asp	
1				5					10					15	
Gly	Gly	Asp	Gly	Glu	Glu	Ala	Glu	Pro	Glu	Gly	Met	Phe	Lys	Ala	
				20					25					30	
Cys	Glu	Asp	Ser	Lys	Arg	Lys	Ala	Arg	Gly	Tyr	Leu	Arg	Leu	Val	
				35					40					45	
Pro	Leu	Phe	Val	Leu	Leu	Ala	Leu	Leu	Val	Leu	Ala	Ser	Ala	Gly	
				50					55					60	
Val	Leu	Leu	Trp	Tyr	Phe	Leu	Gly	Tyr	Lys	Ala	Glu	Val	Met	Val	
				65					70					75	
Ser	Gln	Val	Tyr	Ser	Gly	Ser	Leu	Arg	Val	Leu	Asn	Arg	His	Phe	
				80					85					90	
Ser	Gln	Asp	Leu	Thr	Arg	Arg	Glu	Ser	Ser	Ala	Phe	Arg	Ser	Glu	
				95					100					105	
Thr	Ala	Lys	Ala	Gln	Lys	Met	Leu	Lys	Glu	Leu	Ile	Thr	Ser	Thr	
				110					115					120	
Arg	Leu	Gly	Thr	Tyr	Tyr	Asn	Ser	Ser	Ser	Val	Tyr	Ser	Phe	Gly	
				125					130					135	
Glu	Gly	Pro	Leu	Thr	Cys	Phe	Phe	Trp	Phe	Ile	Leu	Gln	Ile	Pro	
				140					145					150	
Glu	His	Arg	Arg	Leu	Met	Leu	Ser	Pro	Glu	Val	Val	Gln	Ala	Leu	
				155					160					165	
Leu	Val	Glu	Glu	Leu	Leu	Ser	Thr	Val	Asn	Ser	Ser	Ala	Ala	Val	
				170					175					180	
Pro	Tyr	Arg	Ala	Glu	Tyr	Glu	Val	Asp	Pro	Glu	Gly	Leu	Val	Ile	
				185					190					195	
Leu	Glu	Ala	Ser	Val	Lys	Asp	Ile	Ala	Ala	Leu	Asn	Ser	Thr	Leu	
				200					205					210	
Gly	Cys	Tyr	Arg	Tyr	Ser	Tyr	Val	Gly	Gln	Gly	Gln	Val	Leu	Arg	
				215					220					225	
Leu	Lys	Gly	Pro	Asp	His	Leu	Ala	Ser	Ser	Cys	Leu	Trp	His	Leu	
				230					235					240	
Gln	Gly	Pro	Lys	Asp	Leu	Met	Leu	Lys	Leu	Arg	Leu	Glu	Trp	Thr	
				245					250					255	
Leu	Ala	Glu	Cys	Arg	Asp	Arg	Leu	Ala	Met	Tyr	Asp	Val	Ala	Gly	
				260					265					270	
Pro	Leu	Glu	Lys	Arg	Leu	Ile	Thr	Ser	Val	Tyr	Gly	Cys	Ser	Arg	
				275					280					285	
Gln	Glu	Pro	Val	Val	Glu	Val	Leu	Ala	Ser	Gly	Ala	Ile	Met	Ala	

290										295					300				
Val	Val	Trp	Lys	Lys	Gly	Leu	His	Ser	Tyr	Tyr	Asp	Pro	Phe	Val					
				305					310					315					
Leu	Ser	Val	Gln	Pro	Val	Val	Phe	Gln	Ala	Cys	Glu	Val	Asn	Leu					
				320					325					330					
Thr	Leu	Asp	Asn	Arg	Leu	Asp	Ser	Gln	Gly	Val	Leu	Ser	Thr	Pro					
				335					340					345					
Tyr	Phe	Pro	Ser	Tyr	Tyr	Ser	Pro	Gln	Thr	His	Cys	Ser	Trp	His					
				350					355					360					
Leu	Thr	Val	Pro	Ser	Leu	Asp	Tyr	Gly	Leu	Ala	Leu	Trp	Phe	Asp					
				365					370					375					
Ala	Tyr	Ala	Leu	Arg	Arg	Gln	Lys	Tyr	Asp	Leu	Pro	Cys	Thr	Gln					
				380					385					390					
Gly	Gln	Trp	Thr	Ile	Gln	Asn	Arg	Arg	Leu	Cys	Gly	Leu	Arg	Ile					
				395					400					405					
Leu	Gln	Pro	Tyr	Ala	Glu	Arg	Ile	Pro	Val	Val	Ala	Thr	Ala	Gly					
				410					415					420					
Ile	Thr	Ile	Asn	Phe	Thr	Ser	Gln	Ile	Ser	Leu	Thr	Gly	Pro	Gly					
				425					430					435					
Val	Arg	Val	His	Tyr	Gly	Leu	Tyr	Asn	Gln	Ser	Asp	Pro	Cys	Pro					
				440					445					450					
Gly	Glu	Phe	Leu	Cys	Ser	Val	Asn	Gly	Leu	Cys	Val	Pro	Ala	Cys					
				455					460					465					
Asp	Gly	Val	Lys	Asp	Cys	Pro	Asn	Gly	Leu	Asp	Glu	Arg	Asn	Cys					
				470					475					480					
Val	Cys	Arg	Ala	Thr	Phe	Gln	Cys	Lys	Glu	Asp	Ser	Thr	Cys	Ile					
				485					490					495					
Ser	Leu	Pro	Lys	Val	Cys	Asp	Gly	Gln	Pro	Asp	Cys	Leu	Asn	Gly					
				500					505					510					
Ser	Asp	Glu	Glu	Gln	Cys	Gln	Glu	Gly	Val	Pro	Cys	Gly	Thr	Phe					
				515					520					525					
Thr	Phe	Gln	Cys	Glu	Asp	Arg	Ser	Cys	Val	Lys	Lys	Pro	Asn	Pro					
				530					535					540					
Gln	Cys	Asp	Gly	Arg	Pro	Asp	Cys	Arg	Asp	Gly	Ser	Asp	Glu	Glu					
				545					550					555					
His	Cys	Asp	Cys	Gly	Leu	Gln	Gly	Pro	Ser	Ser	Arg	Ile	Val	Gly					
				560					565					570					
Gly	Ala	Val	Ser	Ser	Glu	Gly	Glu	Trp	Pro	Trp	Gln	Ala	Ser	Leu					
				575					580					585					

Gln Val Arg Gly	Arg His Ile Cys Gly	Gly Ala Leu Ile Ala	Asp
	590	595	600
Arg Trp Val Ile	Thr Ala Ala His Cys	Phe Gln Glu Asp Ser	Met
	605	610	615
Ala Ser Thr Val	Leu Trp Thr Val Phe	Leu Gly Lys Val Trp	Gln
	620	625	630
Asn Ser Arg Trp	Pro Gly Glu Val Ser	Phe Lys Val Ser Arg	Leu
	635	640	645
Leu Leu His Pro	Tyr His Glu Glu Asp	Ser His Asp Tyr Asp	Val
	650	655	660
Ala Leu Leu Gln	Leu Asp His Pro Val	Val Arg Ser Ala Ala	Val
	665	670	675
Arg Pro Val Cys	Leu Pro Ala Arg Ser	His Phe Phe Glu Pro	Gly
	680	685	690
Leu His Cys Trp	Ile Thr Gly Trp Gly	Ala Leu Arg Glu Gly	Gly
	695	700	705
Pro Ile Ser Asn	Ala Leu Gln Lys Val	Asp Val Gln Leu Ile	Pro
	710	715	720
Gln Asp Leu Cys	Ser Glu Ala Tyr Arg	Tyr Gln Val Thr Pro	Arg
	725	730	735
Met Leu Cys Ala	Gly Tyr Arg Lys Gly	Lys Lys Asp Ala Cys	Gln
	740	745	750
Gly Asp Ser Gly	Gly Pro Leu Val Cys	Lys Ala Leu Ser Gly	Arg
	755	760	765
Trp Phe Leu Ala	Gly Leu Val Ser Trp	Gly Leu Gly Cys Gly	Arg
	770	775	780
Pro Asn Tyr Phe	Gly Val Tyr Thr Arg	Ile Thr Gly Val Ile	Ser
	785	790	795
Trp Ile Gln Gln	Val Val Thr		
	800		

<210> 170

<211> 1327

<212> DNA

<213> Homo sapiens

<400> 170

gcacccaggg ccagtggacg atccagaaca ggaggctgtg tggcttgccg 50

atcctgcagc cctacgccga gaggatcccc gtggtggcca cggccgggat 100

caccatcaac ttacactccc agatctccct caccgggccc ggtgtgcggg 150

tgcactatgg cttgtacaac cagtcggacc cctgccctgg agagttcctc 200

tgttctgtga atggactctg tgtccctgcc tgtgatgggg tcaaggactg 250  
 cccaacggc ctggatgaga gaaactgcgt ttgcagagcc acattccagt 300  
 gcaaagagga cagcacatgc atctcactgc ccaaggtctg tgatgggcag 350  
 cctgattgtc tcaacggcag cgatgaagag cagtgccagg aaggggtgcc 400  
 atgtgggaca ttcaccttcc agtgtgagga ccggagctgc gtgaagaagc 450  
 ccaaccgcga gtgtgatggg cggcccgact gcagggacgg ctcggatgag 500  
 gagcactgtg actgtggcct ccagggcccc tccagccgca ttgttggtgg 550  
 agctgtgtcc tccgaggggt agtggccatg gcaggccagc ctccaggttc 600  
 ggggtcgaca catctgtggg ggggccctca tcgctgaccg ctgggtgata 650  
 acagctgccc actgcttcca ggaggacagc atggcctcca cgggtgctgtg 700  
 gaccgtgttc ctgggcaagg tgtggcagaa ctgcgctgg cctggagagg 750  
 tgtccttcaa ggtgagccgc ctgctcctgc acccgtagca cgaagaggac 800  
 agccatgact acgacgtggc gctgctgcag ctcgaccacc cgggtggtgcg 850  
 ctcgcccgcc gtgcgccccg tctgcctgcc cgcgcgctcc cacttcttcg 900  
 agccccgcct gcaactgctg attacgggt ggggcgcctt gcgcgagggc 950  
 ggccccatca gcaacgctct gcagaaagt gatgtgcagt tgatcccaca 1000  
 ggacctgtgc agcgaggcct atcgctacca ggtgacgcca cgcagtctgt 1050  
 gtgccggcta ccgcaagggc aagaaggat cctgtcaggg tgactcaggt 1100  
 ggtccgctgg tgtgcaaggc actcagtggc cgctggttcc tggcggggct 1150  
 ggtcagctgg ggctggggct gtggccggcc taactacttc ggcgtctaca 1200  
 cccgcatcac aggtgtgatc agctggatcc agcaagtgg gacctgagga 1250  
 actgcccccc tgcaaagcag ggcccacctc ctggactcag agagcccagg 1300  
 gcaactgcca agcaggggga caagtat 1327

<210> 171

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 171

taacagctgc ccactgcttc cagg 24

<210> 172

<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 172  
taatccagca gtgcaggccg gg 22

<210> 173  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 173  
atggcctcca cgggtgctgtg gaccgtgttc ctgggcaagg tgtggcagaa 50

<210> 174  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 174  
tgcctatgca ctgaggaggc agaag 25

<210> 175  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 175  
aggcagggac acagagtcca ttcac 25

<210> 176  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 176  
agtatgattt gccgtgcacc cagggccagt ggacgatcca gaacaggagg 50

<210> 177  
<211> 1510  
<212> DNA  
<213> Homo sapiens

<400> 177

ggacgagggc agatctcggt ctggggcaag ccgttgacac tcgctccctg 50  
ccaccgcccg ggctccgtgc cgccaagttt tcattttcca cttctctgc 100  
ctccagtccc ccagcccctg gccgagagaa gggctctacc ggccgggatt 150  
gctggaaaca ccaagaggtg gtttttggtt tttaaaactt ctgtttcttg 200  
ggaggggggtg tggcggggca ggatgagcaa ctccgttcct ctgctctgtt 250  
tctggagcct ctgctattgc tttgctgagg ggagccccgt accttttgg 300  
ccagaggggac ggctggaaga taagctccac aaacccaaag ctacacagac 350  
tgaggtcaaa ccatctgtga ggtttaacct ccgcacctcc aaggaccag 400  
agcatgaagg atgtacctc tccgtcggcc acagccagcc cttagaagac 450  
tgcagtttca acatgacagc taaaaccttt ttcattcttc acggatggac 500  
gatgagcggg atctttgaaa actggctgca caaactcgtg tcagccctgc 550  
acacaagaga gaaagacgcc aatgtagttg tgggtgactg gctccccctg 600  
gccaccagc tttacacgga tgcggtaaat aataccaggg tgggtgggaca 650  
cagcattgcc aggatgctcg actggctgca ggagaaggac gatttttctc 700  
tcgggaatgt ccacttgatc ggctacagcc tcggagcgca cgtggccggg 750  
tatgcaggca acttcgtgaa aggaacgggtg ggccgaatca caggtttgga 800  
tcctgccggg cccatgtttg aaggggcca catccacaag aggctctctc 850  
cggacgatgc agattttgtg gatgtctcc acacctacac gcgttccttc 900  
ggcttgagca ttggtattca gatgcctgtg ggccacattg acatctacct 950  
caatgggggt gacttcagc caggctgtgg actcaacgat gtcttgggat 1000  
caattgcata tggaacaatc acagaggtgg taaaatgtga gcatgagcga 1050  
gccgtccacc tctttgttga ctctctggtg aatcaggaca agccgagttt 1100  
tgccttccag tgcactgact ccaatcgctt caaaaagggg atctgtctga 1150  
gctgccgcaa gaaccgttgt aatagcattg gctacaatgc caagaaaatg 1200  
aggaacaaga ggaacagcaa aatgtacctt aaaacccggg caggcatgcc 1250  
tttcagaggt aaccttcagt ccctggagtg tccctgagga aggcccttaa 1300  
tacctccttc ttaataccat gctgcagagc agggcacatc ctagcccagg 1350  
agaagtggcc agcacaatcc aatcaaatcg ttgcaaatca gattacactg 1400  
tgcattgctt aggaagggga atctttacaa aataaacagt gtggaccctt 1450

aataaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 1500

aaaaaaaaaa 1510

<210> 178

<211> 354

<212> PRT

<213> Homo sapiens

<400> 178

Met	Ser	Asn	Ser	Val	Pro	Leu	Leu	Cys	Phe	Trp	Ser	Leu	Cys	Tyr	
1				5					10					15	
Cys	Phe	Ala	Ala	Gly	Ser	Pro	Val	Pro	Phe	Gly	Pro	Glu	Gly	Arg	
				20					25					30	
Leu	Glu	Asp	Lys	Leu	His	Lys	Pro	Lys	Ala	Thr	Gln	Thr	Glu	Val	
				35					40					45	
Lys	Pro	Ser	Val	Arg	Phe	Asn	Leu	Arg	Thr	Ser	Lys	Asp	Pro	Glu	
				50					55					60	
His	Glu	Gly	Cys	Tyr	Leu	Ser	Val	Gly	His	Ser	Gln	Pro	Leu	Glu	
				65					70					75	
Asp	Cys	Ser	Phe	Asn	Met	Thr	Ala	Lys	Thr	Phe	Phe	Ile	Ile	His	
				80					85					90	
Gly	Trp	Thr	Met	Ser	Gly	Ile	Phe	Glu	Asn	Trp	Leu	His	Lys	Leu	
				95					100					105	
Val	Ser	Ala	Leu	His	Thr	Arg	Glu	Lys	Asp	Ala	Asn	Val	Val	Val	
				110					115					120	
Val	Asp	Trp	Leu	Pro	Leu	Ala	His	Gln	Leu	Tyr	Thr	Asp	Ala	Val	
				125					130					135	
Asn	Asn	Thr	Arg	Val	Val	Gly	His	Ser	Ile	Ala	Arg	Met	Leu	Asp	
				140					145					150	
Trp	Leu	Gln	Glu	Lys	Asp	Asp	Phe	Ser	Leu	Gly	Asn	Val	His	Leu	
				155					160					165	
Ile	Gly	Tyr	Ser	Leu	Gly	Ala	His	Val	Ala	Gly	Tyr	Ala	Gly	Asn	
				170					175					180	
Phe	Val	Lys	Gly	Thr	Val	Gly	Arg	Ile	Thr	Gly	Leu	Asp	Pro	Ala	
				185					190					195	
Gly	Pro	Met	Phe	Glu	Gly	Ala	Asp	Ile	His	Lys	Arg	Leu	Ser	Pro	
				200					205					210	
Asp	Asp	Ala	Asp	Phe	Val	Asp	Val	Leu	His	Thr	Tyr	Thr	Arg	Ser	
				215					220					225	
Phe	Gly	Leu	Ser	Ile	Gly	Ile	Gln	Met	Pro	Val	Gly	His	Ile	Asp	
				230					235					240	



Ile	Tyr	Pro	Asn	Gly	Gly	Asp	Phe	Gln	Pro	Gly	Cys	Gly	Leu	Asn
				245					250					255
Asp	Val	Leu	Gly	Ser	Ile	Ala	Tyr	Gly	Thr	Ile	Thr	Glu	Val	Val
				260					265					270
Lys	Cys	Glu	His	Glu	Arg	Ala	Val	His	Leu	Phe	Val	Asp	Ser	Leu
				275					280					285
Val	Asn	Gln	Asp	Lys	Pro	Ser	Phe	Ala	Phe	Gln	Cys	Thr	Asp	Ser
				290					295					300
Asn	Arg	Phe	Lys	Lys	Gly	Ile	Cys	Leu	Ser	Cys	Arg	Lys	Asn	Arg
				305					310					315
Cys	Asn	Ser	Ile	Gly	Tyr	Asn	Ala	Lys	Lys	Met	Arg	Asn	Lys	Arg
				320					325					330
Asn	Ser	Lys	Met	Tyr	Leu	Lys	Thr	Arg	Ala	Gly	Met	Pro	Phe	Arg
				335					340					345
Gly	Asn	Leu	Gln	Ser	Leu	Glu	Cys	Pro						
				350										

<210> 179

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 179

gtgagcatga gogagccgtc cac 23

<210> 180

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 180

gctattacaa cggttcttgc ggcagc 26

<210> 181

<211> 44

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 181

ttgactctct ggtgaatcag gacaagccga gttttgcctt ccag 44

<210> 182

<211> 3240  
<212> DNA  
<213> Homo sapiens

<400> 182

cgagcgctg ggagcgacg tgggcctggg caagggccgg ggcgccgggc 50  
cgagccacct cttccctcc cccgcttccc tgtcgcgctc cgctggctgg 100  
acgcgctgga ggagtggagc agcaccgggc cggccctggg ggctgacagt 150  
cggcaaagt tggccgaag aggaagtggg ctcaaaccgc ggcaggtggc 200  
gaccaggcca gaccaggggc gctcgcgctc tgcggggcgg ctgtaggcga 250  
gggcgcgccc cagtgcgag acccggggct tcaggagccg gcccgggag 300  
agaagagtgc ggcggcggac ggagaaaaca actccaaagt tggcgaaagg 350  
caccgcccct actccgggc tgcgcgccc tccccgccc cagccctggc 400  
atccagagta cgggtcgagc ccgggccatg gagccccct ggggagggcg 450  
caccagggag cctgggcgccc cggggctccg ccgcgacccc atcgggtaga 500  
ccacagaagc tccgggaccc ttccggcacc tctggacagc ccaggatgct 550  
gttgggcacc ctctctctcc tctctcttgg aggcgctctg gcccatccag 600  
accggattat ttttccaaat catgcttctg aggaccccc agcagtgtctc 650  
ttagaagtgc agggcacctt acagaggccc ctggtccggg acagccgcac 700  
ctccctgcc aactgcacct ggctcactct gggcagcaag gaacagactg 750  
tcaccatcag gttccagaag ctacacctgg cctgtggctc agagcgctta 800  
accctacgct cccctctcca gccactgatc tccctgtgtg aggcacctcc 850  
cagccctctg cagctgcccg ggggcaacgt caccatcact tacagctatg 900  
ctggggccag agcaccatg ggccagggt tctgtctctc ctacagccaa 950  
gattggctga tgtgcctgca ggaagagttt cagtgcctga accaccgctg 1000  
tgtatctgct gtccagcgt gtgatgggt tgatgcctgt ggcatggct 1050  
ctgatgaagc aggttcgagc tcagaccct tccctggcct gacccaaga 1100  
ccgctccct cctgccttg caatgtcacc ttggaggact tctatgggt 1150  
cttctctct cctggatata cacacctagc ctcagtctcc caccctcagt 1200  
cctgccattg gctgctggac cccatgatg gccggcggt gccgtgctc 1250  
ttcacagccc tggacttggg ctttggagat gcagtgcagc tgtatgacgg 1300  
ccctgggccc cctgagagct ccgactact gcgtagtctc accacttca 1350

gcaatggcaa ggctgtcaact gtggagacac tgtctggcca ggctgttgtg 1400  
tcctaccaca cagttgcttg gagcaatggt cgtggcttca atgccaccta 1450  
ccatgtgcgg ggctattgct tgccttggga cagaccctgt ggcttaggct 1500  
ctggcctggg agctggcgaa ggccctagggt agcgctgcta cagtgaggca 1550  
cagcgctgtg acggctcatg ggactgtgct gacggcacag atgaggagga 1600  
ctgcccaggc tggccacctg gacacttccc ctgtggggct gctggcacct 1650  
ctggtgccac agcctgctac ctgctgctg accgctgcaa ctaccagact 1700  
ttctgtgctg atggagcaga tgagagacgc tgtcggcatt gccagcctgg 1750  
caatttccga tgcggggacg agaagtgcgt gtatgagacg tgggtgtgcg 1800  
atgggcagcc agactgtgcg gacggcagtg atgagtggga ctgctcctat 1850  
gttctgcccc gcaaggatcat tacagctgca gtcattggca gcctagtgtg 1900  
cggcctgtct ctggtcatcg ccctgggctg cacctgcaag ctctatgcca 1950  
ttcgacacca ggagtacagc atctttgccc ccctctcccg gatggaggct 2000  
gagattgtgc agcagcaggc accccttcc tacgggcagc tcattgcccc 2050  
gggtgccatc ccacctgtag aagactttcc tacagagaat cctaatgata 2100  
actcagtgtt gggcaacctg cgttctctgc tacagatctt acgccaggat 2150  
atgactccag gaggtggccc aggtgcccgc cgtcgtcagc ggggccgctt 2200  
gatgcgacgc ctggtaagcc gtctccgccg ctggggcttg ctccctcgaa 2250  
ccaacacccc ggctcgggccc tctgaggcca gatcccaggc cacaccttct 2300  
gctgtcctccc ttgaggccct agatgggtggc acaggctccag cccgtgaggg 2350  
cggggcagtg ggtgggcaag atggggagca ggcaccccca ctgcccata 2400  
aggtcccccct cccatctgct agcacgtctc cagccccac tactgtccct 2450  
gaagccccag ggccactgcc ctactgccc ctagagccat cactattgtc 2500  
tggagtgggt caggccctgc gaggccgctt gttgccagc ctggggcccc 2550  
caggaccaac cggagcccc cctggacccc acacagcagt cctggccctg 2600  
gaagatgagg acgatgtgct actggtgcca ctggctgagc cgggggtgtg 2650  
ggtagctgag gcagaggatg agccactgct tacctgaggg gacctggggg 2700  
ctctactgag gcctctcccc tgggggctct actcatagtg gcacaacctt 2750  
ttagaggtgg gtcagcctcc cctccaccac ttccttccct gtccctggat 2800

ttcagggact tggtagggcct ccggttgacc ctatgtagct gctataaagt 2850  
 taagtgtccc tcaggcaggg agagggctca cagagtctcc tctgtacgtg 2900  
 gccatggcca gacaccccag tcccttcacc accacctgct cccacgcca 2950  
 ccaccatttg ggtggctggt tttaaaaagt aaagttctta gaggatcata 3000  
 ggtctggaca ctccatcctt gccaaacctc tacccaaaag tggccttaag 3050  
 caccggaatg ccaattaact agagacctc cagcccccaa ggggaggatt 3100  
 tgggcagaac ctgaggtttt gccatccaca atccctcta cagggcctgg 3150  
 ctcacaaaaa gagtgaaca aatgcttcta ttccatagct acggcattgc 3200  
 tcagtaagtt gaggtcaaaa ataaaggaat catacatctc 3240

<210> 183

<211> 713

<212> PRT

<213> Homo sapiens

<400> 183

Met	Leu	Leu	Ala	Thr	Leu	Leu	Leu	Leu	Leu	Leu	Gly	Gly	Ala	Leu	1	5	10	15
Ala	His	Pro	Asp	Arg	Ile	Ile	Phe	Pro	Asn	His	Ala	Cys	Glu	Asp	20	25	30	
Pro	Pro	Ala	Val	Leu	Leu	Glu	Val	Gln	Gly	Thr	Leu	Gln	Arg	Pro	35	40	45	
Leu	Val	Arg	Asp	Ser	Arg	Thr	Ser	Pro	Ala	Asn	Cys	Thr	Trp	Leu	50	55	60	
Ile	Leu	Gly	Ser	Lys	Glu	Gln	Thr	Val	Thr	Ile	Arg	Phe	Gln	Lys	65	70	75	
Leu	His	Leu	Ala	Cys	Gly	Ser	Glu	Arg	Leu	Thr	Leu	Arg	Ser	Pro	80	85	90	
Leu	Gln	Pro	Leu	Ile	Ser	Leu	Cys	Glu	Ala	Pro	Pro	Ser	Pro	Leu	95	100	105	
Gln	Leu	Pro	Gly	Gly	Asn	Val	Thr	Ile	Thr	Tyr	Ser	Tyr	Ala	Gly	110	115	120	
Ala	Arg	Ala	Pro	Met	Gly	Gln	Gly	Phe	Leu	Leu	Ser	Tyr	Ser	Gln	125	130	135	
Asp	Trp	Leu	Met	Cys	Leu	Gln	Glu	Glu	Phe	Gln	Cys	Leu	Asn	His	140	145	150	
Arg	Cys	Val	Ser	Ala	Val	Gln	Arg	Cys	Asp	Gly	Val	Asp	Ala	Cys	155	160	165	
Gly	Asp	Gly	Ser	Asp	Glu	Ala	Gly	Cys	Ser	Ser	Asp	Pro	Phe	Pro				

170										175					180				
Gly	Leu	Thr	Pro	Arg	Pro	Val	Pro	Ser	Leu	Pro	Cys	Asn	Val	Thr					
				185					190					195					
Leu	Glu	Asp	Phe	Tyr	Gly	Val	Phe	Ser	Ser	Pro	Gly	Tyr	Thr	His					
				200					205					210					
Leu	Ala	Ser	Val	Ser	His	Pro	Gln	Ser	Cys	His	Trp	Leu	Leu	Asp					
				215					220					225					
Pro	His	Asp	Gly	Arg	Arg	Leu	Ala	Val	Arg	Phe	Thr	Ala	Leu	Asp					
				230					235					240					
Leu	Gly	Phe	Gly	Asp	Ala	Val	His	Val	Tyr	Asp	Gly	Pro	Gly	Pro					
				245					250					255					
Pro	Glu	Ser	Ser	Arg	Leu	Leu	Arg	Ser	Leu	Thr	His	Phe	Ser	Asn					
				260					265					270					
Gly	Lys	Ala	Val	Thr	Val	Glu	Thr	Leu	Ser	Gly	Gln	Ala	Val	Val					
				275					280					285					
Ser	Tyr	His	Thr	Val	Ala	Trp	Ser	Asn	Gly	Arg	Gly	Phe	Asn	Ala					
				290					295					300					
Thr	Tyr	His	Val	Arg	Gly	Tyr	Cys	Leu	Pro	Trp	Asp	Arg	Pro	Cys					
				305					310					315					
Gly	Leu	Gly	Ser	Gly	Leu	Gly	Ala	Gly	Glu	Gly	Leu	Gly	Glu	Arg					
				320					325					330					
Cys	Tyr	Ser	Glu	Ala	Gln	Arg	Cys	Asp	Gly	Ser	Trp	Asp	Cys	Ala					
				335					340					345					
Asp	Gly	Thr	Asp	Glu	Glu	Asp	Cys	Pro	Gly	Cys	Pro	Pro	Gly	His					
				350					355					360					
Phe	Pro	Cys	Gly	Ala	Ala	Gly	Thr	Ser	Gly	Ala	Thr	Ala	Cys	Tyr					
				365					370					375					
Leu	Pro	Ala	Asp	Arg	Cys	Asn	Tyr	Gln	Thr	Phe	Cys	Ala	Asp	Gly					
				380					385					390					
Ala	Asp	Glu	Arg	Arg	Cys	Arg	His	Cys	Gln	Pro	Gly	Asn	Phe	Arg					
				395					400					405					
Cys	Arg	Asp	Glu	Lys	Cys	Val	Tyr	Glu	Thr	Trp	Val	Cys	Asp	Gly					
				410					415					420					
Gln	Pro	Asp	Cys	Ala	Asp	Gly	Ser	Asp	Glu	Trp	Asp	Cys	Ser	Tyr					
				425					430					435					
Val	Leu	Pro	Arg	Lys	Val	Ile	Thr	Ala	Ala	Val	Ile	Gly	Ser	Leu					
				440					445					450					
Val	Cys	Gly	Leu	Leu	Leu	Val	Ile	Ala	Leu	Gly	Cys	Thr	Cys	Lys					
				455					460					465					

Leu Tyr Ala Ile	Arg Thr Gln Glu Tyr	Ser Ile Phe Ala Pro	Leu
	470	475	480
Ser Arg Met Glu	Ala Glu Ile Val Gln	Gln Gln Ala Pro Pro	Ser
	485	490	495
Tyr Gly Gln Leu	Ile Ala Gln Gly Ala	Ile Pro Pro Val Glu	Asp
	500	505	510
Phe Pro Thr Glu	Asn Pro Asn Asp Asn	Ser Val Leu Gly Asn	Leu
	515	520	525
Arg Ser Leu Leu	Gln Ile Leu Arg Gln	Asp Met Thr Pro Gly	Gly
	530	535	540
Gly Pro Gly Ala	Arg Arg Arg Gln Arg	Gly Arg Leu Met Arg	Arg
	545	550	555
Leu Val Arg Arg	Leu Arg Arg Trp Gly	Leu Leu Pro Arg Thr	Asn
	560	565	570
Thr Pro Ala Arg	Ala Ser Glu Ala Arg	Ser Gln Val Thr Pro	Ser
	575	580	585
Ala Ala Pro Leu	Glu Ala Leu Asp Gly	Gly Thr Gly Pro Ala	Arg
	590	595	600
Glu Gly Gly Ala	Val Gly Gly Gln Asp	Gly Glu Gln Ala Pro	Pro
	605	610	615
Leu Pro Ile Lys	Ala Pro Leu Pro Ser	Ala Ser Thr Ser Pro	Ala
	620	625	630
Pro Thr Thr Val	Pro Glu Ala Pro Gly	Pro Leu Pro Ser Leu	Pro
	635	640	645
Leu Glu Pro Ser	Leu Leu Ser Gly Val	Val Gln Ala Leu Arg	Gly
	650	655	660
Arg Leu Leu Pro	Ser Leu Gly Pro Pro	Gly Pro Thr Arg Ser	Pro
	665	670	675
Pro Gly Pro His	Thr Ala Val Leu Ala	Leu Glu Asp Glu Asp	Asp
	680	685	690
Val Leu Leu Val	Pro Leu Ala Glu Pro	Gly Val Trp Val Ala	Glu
	695	700	705
Ala Glu Asp Glu	Pro Leu Leu Thr		
	710		

<210> 184

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 184  
ggctgtcact gtggagacac 20

<210> 185  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 185  
gcaaggtcat tacagctg 18

<210> 186  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 186  
agaacatagg agcagtccca ctc 23

<210> 187  
<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 187  
tgcctgctgc tgcacaatct cag 23

<210> 188  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 188  
ggctattgct tgccttgga cagaccctgt ggcttaggct ctggc 45

<210> 189  
<211> 663  
<212> DNA  
<213> Homo sapiens

<400> 189  
cgagctgggc gagaagtagg ggagggcggg gctccgccgc ggtggcggtt 50  
gctatcgctt cgcagaacct actcaggcag ccagctgaga agagttgagg 100  
gaaagtgctg ctgctgggtc tgcagacgcg atggataacg tgcagccgaa 150

aataaaacat cgcccttct gcttcagtgt gaaaggccac gtgaagatgc 200  
tgcggtggc actaactgtg acatctatga ccttttttat catcgacaaa 250  
gcccotgaac catatattgt tatcactgga tttgaagtca ccgttatctt 300  
atttttcata cttttatatt tactcagact tgatcgatta atgaagtgg 350  
tattttggcc tttgcttgat attatcaact cactggtaac aacagtattc 400  
atgctcatcg tatctgtgtt ggactgata ccagaaacca caacattgac 450  
agttgggtgga ggggtgtttg cacttgtgac agcagtatgc tgtcttgccg 500  
acggggccct tatttacogg aagcttctgt tcaatcccag cggtccttac 550  
cagaaaaagc ctgtgcatga aaaaaagaa gttttgtaat tttatattac 600  
tttttagttt gatactaagt attaaacata tttctgtatt cttccaaaaa 650  
aaaaaaaaaa aaa 663

<210> 190

<211> 152

<212> PRT

<213> Homo sapiens

<400> 190

Met	Asp	Asn	Val	Gln	Pro	Lys	Ile	Lys	His	Arg	Pro	Phe	Cys	Phe	1	5	10	15
Ser	Val	Lys	Gly	His	Val	Lys	Met	Leu	Arg	Leu	Ala	Leu	Thr	Val	20	25	30	
Thr	Ser	Met	Thr	Phe	Phe	Ile	Ile	Ala	Gln	Ala	Pro	Glu	Pro	Tyr	35	40	45	
Ile	Val	Ile	Thr	Gly	Phe	Glu	Val	Thr	Val	Ile	Leu	Phe	Phe	Ile	50	55	60	
Leu	Leu	Tyr	Val	Leu	Arg	Leu	Asp	Arg	Leu	Met	Lys	Trp	Leu	Phe	65	70	75	
Trp	Pro	Leu	Leu	Asp	Ile	Ile	Asn	Ser	Leu	Val	Thr	Thr	Val	Phe	80	85	90	
Met	Leu	Ile	Val	Ser	Val	Leu	Ala	Leu	Ile	Pro	Glu	Thr	Thr	Thr	95	100	105	
Leu	Thr	Val	Gly	Gly	Gly	Val	Phe	Ala	Leu	Val	Thr	Ala	Val	Cys	110	115	120	
Cys	Leu	Ala	Asp	Gly	Ala	Leu	Ile	Tyr	Arg	Lys	Leu	Leu	Phe	Asn	125	130	135	
Pro	Ser	Gly	Pro	Tyr	Gln	Lys	Lys	Pro	Val	His	Glu	Lys	Lys	Glu	140	145	150	



Val Leu

<210> 191  
<211> 495  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 78, 212, 234, 487  
<223> unknown base

<400> 191  
gggcgagaag taggggaggg cgtgttccgc cgcggtggcg gttgctatcg 50  
ttttgcagaa cctactcagg cagccagntg agaagagttg agggaaagtg 100  
ctgctgctgg gtctgcagac gcgatggata acgtgcagcc gaaaataaaa 150  
catgccccct tctgcttcag tgtgaaaggc cacgtgaaga tgctgcggct 200  
ggcactaact gngacatcta tgaccttttt tatnatcgca caagcccctg 250  
aaccatatat tgttatcact ggatttgaag tcaccgttat cttatttttc 300  
atacttttat atgtactcag acttgatcga ttaatgaagt ggttattttg 350  
gcctttgctt gatattatca actcactggg aacaacagta ttcattgctca 400  
tcgtatctgt gttggcactg ataccagaaa ccacaacatt gacagttggt 450  
ggaggggtgt ttgcacttgt gacagcagta tgctgtnttg ccgac 495

<210> 192  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 192  
cgttttgcag aacctactca ggcag 25

<210> 193  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 193  
cctccaccaa ctgtcaatgt tgtgg 25

<210> 194  
<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 194

aaagtgtctg tgctgggtct gcagacgcga tggataacgt 40

<210> 195

<211> 1879

<212> DNA

<213> Homo sapien

<400> 195

cagccccgcg cgccggccga gtcgtgagc cgcggtgcc ggacgggacg 50  
ggaccggcta ggctgggcgc gccccccggg ccccgccgtg ggcatgggcg 100  
cactggcccg ggcgtgctg ctgcctctgc tggcccagtg gctcctgcgc 150  
gccgccccgg agctggcccc cgcgcccttc acgtgcccc tccgggtggc 200  
cgcggccacg aaccgcgtag ttgcgcccac cccgggaccc gggaccctg 250  
ccgagcgcca cgccgacggc ttggcgctcg cctggagcc tgccctggcg 300  
tccccgcgg gcgcgcgcaa cttcttggcc atggtagaca acctgcaggg 350  
ggactctggc cgcggtact acctggagat gctgatcggg accccccgc 400  
agaagctaca gattctcgtt gacactggaa gcagtaactt tgccgtggca 450  
ggaacccccgc actcctacat agacaogtac tttgacacag agaggtctag 500  
cacataccgc tccaagggct ttgacgtcac agtgaagtac acacaaggaa 550  
gctggacggg cttcgttggg gaagacctcg tcaccatccc caaaggcttc 600  
aatacttctt ttcttgtcaa cattgccact atttttgaat cagagaattt 650  
ctttttgcct gggattaaat ggaatggaat acttggccta gcttatgcca 700  
cacttgccaa gccatcaagt tctctggaga ccttcttcga ctccctgggtg 750  
acacaagcaa acatccccaa cgttttctcc atgcagatgt gtggagccgg 800  
cttgcccgtt gctggatctg ggaccaacgg aggtagtctt gtcttgggtg 850  
gaattgaacc aagtttgtat aaaggagaca tctggtatac ccctattaag 900  
gaagagtggg actaccagat agaaattctg aaattggaaa ttggaggcca 950  
aagccttaat ctggactgca gagagtataa cgcagacaag gccatcgtgg 1000  
acagtggcac cacgctgctg cgccctcccc agaaggtgtt tgatgcgggtg 1050  
gtggaagctg tggcccgcgc atctctgatt ccagaattct ctgatggttt 1100

ctggactggg tcccagctgg cgtgctggac gaattcggaa acaccttgg 1150  
 cttacttccc taaaatctcc atctacctga gagacgagaa ctccagcagg 1200  
 tcattccgta tcacaatcct gcctcagctt tacattcagc ccatgatggg 1250  
 ggccggcctg aattatgaat gttaccgatt cggcatttcc ccatccacaa 1300  
 atgcgctggg gatcgggtgcc acgggtgatgg agggcttcta cgtcatcttc 1350  
 gacagagccc agaagagggt gggcttcgca ggcagcccct gtgcagaaat 1400  
 tgcagggtgct gcagtgtctg aaatttccgg gccttttctca acagaggatg 1450  
 tagccagcaa ctgtgtcccc gctcagtctt tgagcgagcc cattttgtgg 1500  
 attgtgtcct atgcgctcat gagcgtctgt ggagccatcc tccttgtctt 1550  
 aatcgtcctg ctgctgctgc cgttccgggtg tcagcgtcgc ccccgtagacc 1600  
 ctgaggctcgt caatgatgag tcctctctgg tcagacatcg ctggaaatga 1650  
 atagccaggc ctgacctcaa gcaaccatga actcagctat taagaaaatc 1700  
 acatttccag ggcagcagcc gggatcgatg gtggcgcttt ctctgtgcc 1750  
 caccgctctt caatctctgt tctgtccca gatgccttct agattcactg 1800  
 tcttttgatt cttgattttc aagctttcaa atctcccta cttccaagaa 1850  
 aaataattaa aaaaaaaact tcattctaa 1879

<210> 196

<211> 518

<212> PRT

<213> Homo sapien

<400> 196

Met	Gly	Ala	Leu	Ala	Arg	Ala	Leu	Leu	Leu	Pro	Leu	Leu	Ala	Gln
1				5					10					15
Trp	Leu	Leu	Arg	Ala	Ala	Pro	Glu	Leu	Ala	Pro	Ala	Pro	Phe	Thr
			20						25					30
Leu	Pro	Leu	Arg	Val	Ala	Ala	Ala	Thr	Asn	Arg	Val	Val	Ala	Pro
			35						40					45
Thr	Pro	Gly	Pro	Gly	Thr	Pro	Ala	Glu	Arg	His	Ala	Asp	Gly	Leu
			50						55					60
Ala	Leu	Ala	Leu	Glu	Pro	Ala	Leu	Ala	Ser	Pro	Ala	Gly	Ala	Ala
			65						70					75
Asn	Phe	Leu	Ala	Met	Val	Asp	Asn	Leu	Gln	Gly	Asp	Ser	Gly	Arg
			80						85					90
Gly	Tyr	Tyr	Leu	Glu	Met	Leu	Ile	Gly	Thr	Pro	Pro	Gln	Lys	Leu
			95						100					105

Gln	Ile	Leu	Val	Asp	Thr	Gly	Ser	Ser	Asn	Phe	Ala	Val	Ala	Gly	
				110					115					120	
Thr	Pro	His	Ser	Tyr	Ile	Asp	Thr	Tyr	Phe	Asp	Thr	Glu	Arg	Ser	
				125					130					135	
Ser	Thr	Tyr	Arg	Ser	Lys	Gly	Phe	Asp	Val	Thr	Val	Lys	Tyr	Thr	
				140					145					150	
Gln	Gly	Ser	Trp	Thr	Gly	Phe	Val	Gly	Glu	Asp	Leu	Val	Thr	Ile	
				155					160					165	
Pro	Lys	Gly	Phe	Asn	Thr	Ser	Phe	Leu	Val	Asn	Ile	Ala	Thr	Ile	
				170					175					180	
Phe	Glu	Ser	Glu	Asn	Phe	Phe	Leu	Pro	Gly	Ile	Lys	Trp	Asn	Gly	
				185					190					195	
Ile	Leu	Gly	Leu	Ala	Tyr	Ala	Thr	Leu	Ala	Lys	Pro	Ser	Ser	Ser	
				200					205					210	
Leu	Glu	Thr	Phe	Phe	Asp	Ser	Leu	Val	Thr	Gln	Ala	Asn	Ile	Pro	
				215					220					225	
Asn	Val	Phe	Ser	Met	Gln	Met	Cys	Gly	Ala	Gly	Leu	Pro	Val	Ala	
				230					235					240	
Gly	Ser	Gly	Thr	Asn	Gly	Gly	Ser	Leu	Val	Leu	Gly	Gly	Ile	Glu	
				245					250					255	
Pro	Ser	Leu	Tyr	Lys	Gly	Asp	Ile	Trp	Tyr	Thr	Pro	Ile	Lys	Glu	
				260					265					270	
Glu	Trp	Tyr	Tyr	Gln	Ile	Glu	Ile	Leu	Lys	Leu	Glu	Ile	Gly	Gly	
				275					280					285	
Gln	Ser	Leu	Asn	Leu	Asp	Cys	Arg	Glu	Tyr	Asn	Ala	Asp	Lys	Ala	
				290					295					300	
Ile	Val	Asp	Ser	Gly	Thr	Thr	Leu	Leu	Arg	Leu	Pro	Gln	Lys	Val	
				305					310					315	
Phe	Asp	Ala	Val	Val	Glu	Ala	Val	Ala	Arg	Ala	Ser	Leu	Ile	Pro	
				320					325					330	
Glu	Phe	Ser	Asp	Gly	Phe	Trp	Thr	Gly	Ser	Gln	Leu	Ala	Cys	Trp	
				335					340					345	
Thr	Asn	Ser	Glu	Thr	Pro	Trp	Ser	Tyr	Phe	Pro	Lys	Ile	Ser	Ile	
				350					355					360	
Tyr	Leu	Arg	Asp	Glu	Asn	Ser	Ser	Arg	Ser	Phe	Arg	Ile	Thr	Ile	
				365					370					375	
Leu	Pro	Gln	Leu	Tyr	Ile	Gln	Pro	Met	Met	Gly	Ala	Gly	Leu	Asn	
				380					385					390	
Tyr	Glu	Cys	Tyr	Arg	Phe	Gly	Ile	Ser	Pro	Ser	Thr	Asn	Ala	Leu	

395	400	405
Val Ile Gly Ala Thr Val Met Glu Gly Phe Tyr Val Ile Phe Asp		
410	415	420
Arg Ala Gln Lys Arg Val Gly Phe Ala Ala Ser Pro Cys Ala Glu		
425	430	435
Ile Ala Gly Ala Ala Val Ser Glu Ile Ser Gly Pro Phe Ser Thr		
440	445	450
Glu Asp Val Ala Ser Asn Cys Val Pro Ala Gln Ser Leu Ser Glu		
455	460	465
Pro Ile Leu Trp Ile Val Ser Tyr Ala Leu Met Ser Val Cys Gly		
470	475	480
Ala Ile Leu Leu Val Leu Ile Val Leu Leu Leu Leu Pro Phe Arg		
485	490	495
Cys Gln Arg Arg Pro Arg Asp Pro Glu Val Val Asn Asp Glu Ser		
500	505	510
Ser Leu Val Arg His Arg Trp Lys		
515		

<210> 197

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 197

cgcagaagct acagattctc g 21

<210> 198

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 198

ggaaattgga ggccaaagc 19

<210> 199

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 199

ggatgtagcc agcaactgtg 20

<210> 200  
<211> 19  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 200  
gccttggctc gttctcttc 19

<210> 201  
<211> 18  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 201  
ggtcctgtgc ctggatgg 18

<210> 202  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 202  
gacaagacta cctccgttgg tc 22

<210> 203  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 203  
tgatgcacag ttcagcacct gttg 24

<210> 204  
<211> 47  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 204  
cgctccaagg gctttgacgt cacagtgaag tacacacaag gaagctg 47

<210> 205  
<211> 1939  
<212> DNA

<213> Homo sapiens

<400> 205

cgccctccgcc ttccggaggct gacgcgcccc ggcgccgttc caggcctgtg 50  
cagggcggat cggcagccgc ctggcggcga tccagggcgg tgcggggcct 100  
gggcgggagc cgggaggcgc ggccggcatg gaggcgctgc tgctgggcgc 150  
ggggttgctg ctgggcgctt acgtgcttgt ctactacaac ctggtgaagg 200  
ccccgccgtg cggcgccatg ggcaacctgc ggggccgcac ggccgtggtc 250  
acgggcgcca acagcggcat cggaaagatg acggcgctgg agctggcgcg 300  
ccggggagcg cgcgtggtgc tggcctgccg cagccaggag cgcggggagg 350  
cggtgcctt cgacctccgc caggagagtg ggaacaatga ggtcatcttc 400  
atggccttgg acttggccag tctggcctcg gtgcgggcct ttgccactgc 450  
ctttctgagc tctgagccac ggttggacat cctcatccac aatgccgcta 500  
tcagttcctg tggccggacc cgtgaggcgt ttaacctgct gcttcgggtg 550  
aaccatatcg gtccctttct gctgacacat ctgctgctgc cttgcctgaa 600  
ggcatgtgcc cctagccgcg tgggtggtggt agcctcagct gccactgtc 650  
ggggacgtct tgacttcaaa cgccctggacc gcccagtggg gggctggcgg 700  
caggagctgc gggcatatgc tgacactaag ctggctaata tactgtttgc 750  
ccgggagctc gccaaaccagc ttgaggccac tggcgtcacc tgctatgcag 800  
cccaccagc gcctgtgaac tcggagctgt tcctgcgcca tgttcctgga 850  
tggctgcgcc cacttttgcg ccatttggct tggctggtgc tccgggcacc 900  
aagagggggg gccccagacac ccctgtattg tgctctacaa gagggcatcg 950  
agcccctcag tgggagatat tttgccaaact gccatgtgga agaggtgcct 1000  
ccagctgcc gccagcaccg ggcagcccat cggctatggg aggccagcaa 1050  
gaggtggca gggcttgggc ctggggagga tgctgaacct gatgaagacc 1100  
cccagtctga ggactcagag gcccctctt ctctaagcac cccccaccct 1150  
gaggagccca cagttttctc accttaccac agccctcaga gctcaccaga 1200  
tttgtctaag atgacgcacc gaattcaggc taaagttgag cctgagatcc 1250  
agctctccta accctcaggc caggatgctt gccatggcac ttcattgtcc 1300  
ttgaaaacct cggatgtgtg tgaggccatg ccctggacac tgacgggttt 1350  
gtgatcttga cctccgtggg tactttctgg ggccccaagc tgtgccctgg 1400

acatctcttt tcttggttga aggaataatg ggtgattatt tcttctgag 1450  
 agtgacagta accccagatg gagagatagg ggtatgctag acactgtgct 1500  
 tctcggaat ttggatgtag tattttcagg cccaccctt attgattctg 1550  
 atcagctctg gagcagagggc agggagtttg caatgtgatg cactgccaac 1600  
 attgagaatt agtgaactga tccctttgca accgtctagc taggtagtta 1650  
 aattaccccc atgttaatga agcggaatta ggctcccgag ctaagggact 1700  
 cgcctagggg ctcacagtga gtaggaggag ggctgggat ctgaacccaa 1750  
 gggctctgagg ccagggccga ctgccgtaag atgggtgctg agaagtgagt 1800  
 cagggcaggg cagctggtat cgaggtgccc catgggagta aggggacgcc 1850  
 ttccgggcgg atgcagggtt ggggtcatct gtatctgaag cccctcgaa 1900  
 taaagcgcgt tgaccgcaa aaaaaaaaaa aaaaaaaaaa 1939

<210> 206  
 <211> 377  
 <212> PRT  
 <213> Homo sapiens

<400> 206  
 Met Glu Ala Leu Leu Leu Gly Ala Gly Leu Leu Leu Gly Ala Tyr  
 1 5 10 15  
 Val Leu Val Tyr Tyr Asn Leu Val Lys Ala Pro Pro Cys Gly Gly  
 20 25 30  
 Met Gly Asn Leu Arg Gly Arg Thr Ala Val Val Thr Gly Ala Asn  
 35 40 45  
 Ser Gly Ile Gly Lys Met Thr Ala Leu Glu Leu Ala Arg Arg Gly  
 50 55 60  
 Ala Arg Val Val Leu Ala Cys Arg Ser Gln Glu Arg Gly Glu Ala  
 65 70 75  
 Ala Ala Phe Asp Leu Arg Gln Glu Ser Gly Asn Asn Glu Val Ile  
 80 85 90  
 Phe Met Ala Leu Asp Leu Ala Ser Leu Ala Ser Val Arg Ala Phe  
 95 100 105  
 Ala Thr Ala Phe Leu Ser Ser Glu Pro Arg Leu Asp Ile Leu Ile  
 110 115 120  
 His Asn Ala Gly Ile Ser Ser Cys Gly Arg Thr Arg Glu Ala Phe  
 125 130 135  
 Asn Leu Leu Leu Arg Val Asn His Ile Gly Pro Phe Leu Leu Thr  
 140 145 150



His	Leu	Leu	Leu	Pro	Cys	Leu	Lys	Ala	Cys	Ala	Pro	Ser	Arg	Val	155	160	165
Val	Val	Val	Ala	Ser	Ala	Ala	His	Cys	Arg	Gly	Arg	Leu	Asp	Phe	170	175	180
Lys	Arg	Leu	Asp	Arg	Pro	Val	Val	Gly	Trp	Arg	Gln	Glu	Leu	Arg	185	190	195
Ala	Tyr	Ala	Asp	Thr	Lys	Leu	Ala	Asn	Val	Leu	Phe	Ala	Arg	Glu	200	205	210
Leu	Ala	Asn	Gln	Leu	Glu	Ala	Thr	Gly	Val	Thr	Cys	Tyr	Ala	Ala	215	220	225
His	Pro	Gly	Pro	Val	Asn	Ser	Glu	Leu	Phe	Leu	Arg	His	Val	Pro	230	235	240
Gly	Trp	Leu	Arg	Pro	Leu	Leu	Arg	Pro	Leu	Ala	Trp	Leu	Val	Leu	245	250	255
Arg	Ala	Pro	Arg	Gly	Gly	Ala	Gln	Thr	Pro	Leu	Tyr	Cys	Ala	Leu	260	265	270
Gln	Glu	Gly	Ile	Glu	Pro	Leu	Ser	Gly	Arg	Tyr	Phe	Ala	Asn	Cys	275	280	285
His	Val	Glu	Glu	Val	Pro	Pro	Ala	Ala	Arg	Asp	Asp	Arg	Ala	Ala	290	295	300
His	Arg	Leu	Trp	Glu	Ala	Ser	Lys	Arg	Leu	Ala	Gly	Leu	Gly	Pro	305	310	315
Gly	Glu	Asp	Ala	Glu	Pro	Asp	Glu	Asp	Pro	Gln	Ser	Glu	Asp	Ser	320	325	330
Glu	Ala	Pro	Ser	Ser	Leu	Ser	Thr	Pro	His	Pro	Glu	Glu	Pro	Thr	335	340	345
Val	Ser	Gln	Pro	Tyr	Pro	Ser	Pro	Gln	Ser	Ser	Pro	Asp	Leu	Ser	350	355	360
Lys	Met	Thr	His	Arg	Ile	Gln	Ala	Lys	Val	Glu	Pro	Glu	Ile	Gln	365	370	375

Leu Ser

<210> 207

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 207

cttcatggcc ttggacttgg ccag 24

<210> 208  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 208  
acgccagtgg cctcaagctg gttg 24

<210> 209  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 209  
ctttctgagc tctgagccac ggttgacat cctcatccac aatgc 45

<210> 210  
<211> 3716  
<212> DNA  
<213> Homo sapiens

<400> 210  
ggaggagaca gcctcctggg gggcaggggt tccctgcctc tgctgctcct 50  
gctcatcatg ggaggcatgg ctcaggactc cccgccccag atcctagtcc 100  
acccccagga ccagctgttc cagggccctg gccctgccag gatgagctgc 150  
caagcctcag gccagccacc tcccaccatc cgctgggtgc tgaatgggca 200  
gccctgagc atggtgcccc cagaccacaca ccacctcctg cctgatggga 250  
cccttctgct gctacagccc cctgcccggg gacatgcca cgatggccag 300  
gccctgtcca cagacctggg tgtctacaca tgtgaggcca gcaaccggct 350  
tggcacggca gtcagcagag gcgctcggt gtctgtggct gtcctccggg 400  
aggatttcca gatccagcct cgggacatgg tggctgtggt gggtgagcag 450  
tttactctgg aatgtggggc gccctggggc caccagagc ccacagtctc 500  
atggtggaaa gatgggaaac ccctggccct ccagcccga aggcacacag 550  
tgtccggggg gtccctgctg atggcaagag cagagaagag tgacgaaggg 600  
acctacatgt gtgtggccac caacagcgca ggacataggg agagccgcgc 650  
agcccgggtt tccatccagg agccccagga ctacacggag cctgtggagc 700  
ttctggctgt gcgaattcag ctggaaaatg tgacactgct gaaccggat 750

cctgcagagg gccccaagcc tagaccggcg gtgtggctca gctggaaggt 800  
cagtggccct gctgcgcctg cccaatctta cacggccttg ttcaggaccc 850  
agactgcccc gggaggccag ggagctccgt gggcagagga gctgctggcc 900  
ggctggcaga gcgcagagct tggaggcctc cactggggcc aagactacga 950  
gttcaaagtg agaccatcct ctggccgggc tcgaggccct gacagcaacg 1000  
tgctgctcct gaggtgcccg gaaaaagtgc ccagtgcccc acctcaggaa 1050  
gtgactctaa agcctggcaa tggcactgtc tttgtgagct ggggccacc 1100  
acctgctgaa aaccacaatg gcatcatccg tggctaccag gtctggagcc 1150  
tgggcaacac atcactgcca ccagccaact ggactgtagt tggtagcag 1200  
accagctgg aaatcgccac ccatatgcca ggctcctact gcgtgcaagt 1250  
ggctgcagtc actggtgctg gagctgggga gccagtaga cctgtctgcc 1300  
tcctttttaga gcaggccatg gagcgagcca cccaagaacc cagtgagcat 1350  
ggcccttga ccctggagca gctgagggct acctgaagc ggcctgaggt 1400  
cattgccacc tgcggtgttg cactctggct gctgcttctg ggcaccgccg 1450  
tgtgtatcca ccgccggcgc cgagctaggg tgcacctggg ccaggtctg 1500  
tacagatata ccagtgagga tgccatccta aaacacagga tggatcacag 1550  
tgactcccag tggttggcag acacttggcg ttccacctct ggctctcggg 1600  
acctgagcag cagcagcagc ctacagcagtc ggctgggggc ggatgcccgg 1650  
gacccactag actgtcgtcg ctcttctctc tcctgggact cccgaagccc 1700  
cggcgtgccc ctgcttccag acaccagcac tttttatggc tcctcatcg 1750  
ctgagctgcc ctccagtacc ccagccaggc caagtccca ggtcccagct 1800  
gtcaggcgcc tcccaccca gctggcccag ctctccagcc cctgttccag 1850  
ctcagacagc ctctgcagcc gcaggggact ctcttctccc cgcttgtctc 1900  
tgggccctgc agaggcttgg aaggccaaaa agaagcagga gctgcagcat 1950  
gccaacagtt cccactgct ccggggcagc cactccttgg agctccgggc 2000  
ctgtgagtta ggaaatagag gttccaagaa cttttccaa agcccaggag 2050  
ctgtgcccc aactctggtt gcctggcggg ccctgggacc gaaactcctc 2100  
agctcctcaa atgagctggt tactcgtcat ctccctccag caccctctt 2150  
tcctcatgaa actccccaa ctacagagtc acagaccag cctccggtgg 2200

caccacaggc tccctcctcc atcctgctgc cagcagcccc catccccatc 2250  
cttagcccct gcagtcccc tagccccag gcctcttccc tctctggccc 2300  
cagcccagct tccagtcgcc tgtccagctc ctactgtca tccctggggg 2350  
aggatcaaga cagcgtgctg acccctgagg aggtagccct gtgcttgaa 2400  
ctcagtgagg gtgaggagac tcccaggaac agcgtctctc ccatgccaag 2450  
ggctccttca cccccacca cctatgggta catcagcgtc ccaacagcct 2500  
cagagttcac ggacatgggc aggactggag gaggggtggg gccaagggg 2550  
ggagtcttgc tgtgcccacc toggccctgc ctacccccca ccccagcga 2600  
gggctcctta gccaatggtt ggggctcagc ctctgaggac aatgccgcca 2650  
gcgccagagc cagccttgtc agctcctccg atggctcctt cctcgctgat 2700  
gctcactttg ccggggccct ggcagtggct gtggatagct ttggtttcgg 2750  
tctagagccc agggaggcag actgcgtctt catagatgcc tcatcacctc 2800  
cctccccacg ggatgagatc ttctgaccc ccaacctctc cctgcccctg 2850  
tgaggagtga ggccagactg gttggaagac atggaggtca gccacacca 2900  
gcggctggga agggggatgc ctccctggcc ccctgactct cagatctctt 2950  
cccagagaag tcagctccac tgtcgtatgc ccaaggctgg tgcttctcct 3000  
gtagattact cctgaaccgt gtccctgaga cttcccagac gggaatcaga 3050  
accacttctc ctgtccaccc acaagacctg ggctgtggtg tgtgggtctt 3100  
ggcctgtggt tctctgcagc tggggccac cttcccaagc ctccagagag 3150  
ttctccctcc acgattgtga aaacaaatga aaacaaaatt agagcaaagc 3200  
tgacctggag ccctcaggga gcaaaacatc atctccacct gactcctagc 3250  
cactgctttc tcctctgtgc catccactcc caccaccagg ttgttttggc 3300  
ctgaggagca gccctgcctg ctgctcttcc ccaccattt ggatcacagg 3350  
aagtggagga gccagagggt cctttgtgga ggacagcagt ggctgctggg 3400  
agagggctgt ggaggaagga gcttctcgga gccccctctc agccttacct 3450  
gggcccctcc tctagagaag agctcaactc tctcccaacc tcaccatgga 3500  
aagaaaataa ttatgaatgc cactgaggca ctgaggccct acctcatgcc 3550  
aaacaaaggg ttcaaggctg ggtctagcga ggatgctgaa ggaaggagg 3600  
tatgagaccg taggtcaaaa gcaccatcct cgtactgttg tcactatgag 3650

cttaagaaat ttgataccat aaaatggtaa aaaaaaaaaa aaaaaaaaaa 3700

aaaaaaaaaa aaaaaa 3716

<210> 211

<211> 985

<212> PRT

<213> Homo sapiens

<400> 211

Met	Gly	Gly	Met	Ala	Gln	Asp	Ser	Pro	Pro	Gln	Ile	Leu	Val	His
1				5					10					15

Pro	Gln	Asp	Gln	Leu	Phe	Gln	Gly	Pro	Gly	Pro	Ala	Arg	Met	Ser
			20						25					30

Cys	Gln	Ala	Ser	Gly	Gln	Pro	Pro	Pro	Thr	Ile	Arg	Trp	Leu	Leu
				35					40					45

Asn	Gly	Gln	Pro	Leu	Ser	Met	Val	Pro	Pro	Asp	Pro	His	His	Leu
				50					55					60

Leu	Pro	Asp	Gly	Thr	Leu	Leu	Leu	Leu	Gln	Pro	Pro	Ala	Arg	Gly
				65					70					75

His	Ala	His	Asp	Gly	Gln	Ala	Leu	Ser	Thr	Asp	Leu	Gly	Val	Tyr
				80					85					90

Thr	Cys	Glu	Ala	Ser	Asn	Arg	Leu	Gly	Thr	Ala	Val	Ser	Arg	Gly
				95					100					105

Ala	Arg	Leu	Ser	Val	Ala	Val	Leu	Arg	Glu	Asp	Phe	Gln	Ile	Gln
				110					115					120

Pro	Arg	Asp	Met	Val	Ala	Val	Val	Gly	Glu	Gln	Phe	Thr	Leu	Glu
				125					130					135

Cys	Gly	Pro	Pro	Trp	Gly	His	Pro	Glu	Pro	Thr	Val	Ser	Trp	Trp
				140					145					150

Lys	Asp	Gly	Lys	Pro	Leu	Ala	Leu	Gln	Pro	Gly	Arg	His	Thr	Val
				155					160					165

Ser	Gly	Gly	Ser	Leu	Leu	Met	Ala	Arg	Ala	Glu	Lys	Ser	Asp	Glu
				170					175					180

Gly	Thr	Tyr	Met	Cys	Val	Ala	Thr	Asn	Ser	Ala	Gly	His	Arg	Glu
				185					190					195

Ser	Arg	Ala	Ala	Arg	Val	Ser	Ile	Gln	Glu	Pro	Gln	Asp	Tyr	Thr
				200					205					210

Glu	Pro	Val	Glu	Leu	Leu	Ala	Val	Arg	Ile	Gln	Leu	Glu	Asn	Val
				215					220					225

Thr	Leu	Leu	Asn	Pro	Asp	Pro	Ala	Glu	Gly	Pro	Lys	Pro	Arg	Pro
				230					235					240

Ala Val Trp Leu Ser Trp Lys Val Ser Gly Pro Ala Ala Pro Ala	245	250	255
Gln Ser Tyr Thr Ala Leu Phe Arg Thr Gln Thr Ala Pro Gly Gly	260	265	270
Gln Gly Ala Pro Trp Ala Glu Glu Leu Leu Ala Gly Trp Gln Ser	275	280	285
Ala Glu Leu Gly Gly Leu His Trp Gly Gln Asp Tyr Glu Phe Lys	290	295	300
Val Arg Pro Ser Ser Gly Arg Ala Arg Gly Pro Asp Ser Asn Val	305	310	315
Leu Leu Leu Arg Leu Pro Glu Lys Val Pro Ser Ala Pro Pro Gln	320	325	330
Glu Val Thr Leu Lys Pro Gly Asn Gly Thr Val Phe Val Ser Trp	335	340	345
Val Pro Pro Pro Ala Glu Asn His Asn Gly Ile Ile Arg Gly Tyr	350	355	360
Gln Val Trp Ser Leu Gly Asn Thr Ser Leu Pro Pro Ala Asn Trp	365	370	375
Thr Val Val Gly Glu Gln Thr Gln Leu Glu Ile Ala Thr His Met	380	385	390
Pro Gly Ser Tyr Cys Val Gln Val Ala Ala Val Thr Gly Ala Gly	395	400	405
Ala Gly Glu Pro Ser Arg Pro Val Cys Leu Leu Leu Glu Gln Ala	410	415	420
Met Glu Arg Ala Thr Gln Glu Pro Ser Glu His Gly Pro Trp Thr	425	430	435
Leu Glu Gln Leu Arg Ala Thr Leu Lys Arg Pro Glu Val Ile Ala	440	445	450
Thr Cys Gly Val Ala Leu Trp Leu Leu Leu Leu Gly Thr Ala Val	455	460	465
Cys Ile His Arg Arg Arg Arg Ala Arg Val His Leu Gly Pro Gly	470	475	480
Leu Tyr Arg Tyr Thr Ser Glu Asp Ala Ile Leu Lys His Arg Met	485	490	495
Asp His Ser Asp Ser Gln Trp Leu Ala Asp Thr Trp Arg Ser Thr	500	505	510
Ser Gly Ser Arg Asp Leu Ser Ser Ser Ser Ser Leu Ser Ser Arg	515	520	525
Leu Gly Ala Asp Ala Arg Asp Pro Leu Asp Cys Arg Arg Ser Leu			

530					535					540				
Leu	Ser	Trp	Asp	Ser	Arg	Ser	Pro	Gly	Val	Pro	Leu	Leu	Pro	Asp
				545					550					555
Thr	Ser	Thr	Phe	Tyr	Gly	Ser	Leu	Ile	Ala	Glu	Leu	Pro	Ser	Ser
				560					565					570
Thr	Pro	Ala	Arg	Pro	Ser	Pro	Gln	Val	Pro	Ala	Val	Arg	Arg	Leu
				575					580					585
Pro	Pro	Gln	Leu	Ala	Gln	Leu	Ser	Ser	Pro	Cys	Ser	Ser	Ser	Asp
				590					595					600
Ser	Leu	Cys	Ser	Arg	Arg	Gly	Leu	Ser	Ser	Pro	Arg	Leu	Ser	Leu
				605					610					615
Ala	Pro	Ala	Glu	Ala	Trp	Lys	Ala	Lys	Lys	Lys	Gln	Glu	Leu	Gln
				620					625					630
His	Ala	Asn	Ser	Ser	Pro	Leu	Leu	Arg	Gly	Ser	His	Ser	Leu	Glu
				635					640					645
Leu	Arg	Ala	Cys	Glu	Leu	Gly	Asn	Arg	Gly	Ser	Lys	Asn	Leu	Ser
				650					655					660
Gln	Ser	Pro	Gly	Ala	Val	Pro	Gln	Ala	Leu	Val	Ala	Trp	Arg	Ala
				665					670					675
Leu	Gly	Pro	Lys	Leu	Leu	Ser	Ser	Ser	Asn	Glu	Leu	Val	Thr	Arg
				680					685					690
His	Leu	Pro	Pro	Ala	Pro	Leu	Phe	Pro	His	Glu	Thr	Pro	Pro	Thr
				695					700					705
Gln	Ser	Gln	Gln	Thr	Gln	Pro	Pro	Val	Ala	Pro	Gln	Ala	Pro	Ser
				710					715					720
Ser	Ile	Leu	Leu	Pro	Ala	Ala	Pro	Ile	Pro	Ile	Leu	Ser	Pro	Cys
				725					730					735
Ser	Pro	Pro	Ser	Pro	Gln	Ala	Ser	Ser	Leu	Ser	Gly	Pro	Ser	Pro
				740					745					750
Ala	Ser	Ser	Arg	Leu	Ser	Ser	Ser	Ser	Leu	Ser	Ser	Leu	Gly	Glu
				755					760					765
Asp	Gln	Asp	Ser	Val	Leu	Thr	Pro	Glu	Glu	Val	Ala	Leu	Cys	Leu
				770					775					780
Glu	Leu	Ser	Glu	Gly	Glu	Glu	Thr	Pro	Arg	Asn	Ser	Val	Ser	Pro
				785					790					795
Met	Pro	Arg	Ala	Pro	Ser	Pro	Pro	Thr	Thr	Tyr	Gly	Tyr	Ile	Ser
				800					805					810
Val	Pro	Thr	Ala	Ser	Glu	Phe	Thr	Asp	Met	Gly	Arg	Thr	Gly	Gly
				815					820					825

Gly	Val	Gly	Pro	Lys	Gly	Gly	Val	Leu	Leu	Cys	Pro	Pro	Arg	Pro	
				830					835					840	
Cys	Leu	Thr	Pro	Thr	Pro	Ser	Glu	Gly	Ser	Leu	Ala	Asn	Gly	Trp	
				845					850					855	
Gly	Ser	Ala	Ser	Glu	Asp	Asn	Ala	Ala	Ser	Ala	Arg	Ala	Ser	Leu	
				860					865					870	
Val	Ser	Ser	Ser	Asp	Gly	Ser	Phe	Leu	Ala	Asp	Ala	His	Phe	Ala	
				875					880					885	
Arg	Ala	Leu	Ala	Val	Ala	Val	Asp	Ser	Phe	Gly	Phe	Gly	Leu	Glu	
				890					895					900	
Pro	Arg	Glu	Ala	Asp	Cys	Val	Phe	Ile	Asp	Ala	Ser	Ser	Pro	Pro	
				905					910					915	
Ser	Pro	Arg	Asp	Glu	Ile	Phe	Leu	Thr	Pro	Asn	Leu	Ser	Leu	Pro	
				920					925					930	
Leu	Trp	Glu	Trp	Arg	Pro	Asp	Trp	Leu	Glu	Asp	Met	Glu	Val	Ser	
				935					940					945	
His	Thr	Gln	Arg	Leu	Gly	Arg	Gly	Met	Pro	Pro	Trp	Pro	Pro	Asp	
				950					955					960	
Ser	Gln	Ile	Ser	Ser	Gln	Arg	Ser	Gln	Leu	His	Cys	Arg	Met	Pro	
				965					970					975	
Lys	Ala	Gly	Ala	Ser	Pro	Val	Asp	Tyr	Ser						
				980					985						

<210> 212

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 212

gaagggacct acatgtgtgt ggcc 24

<210> 213

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 213

actgaccttc cagctgagcc acac 24

<210> 214

<211> 50

<212> DNA



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 214

aggactacac ggagcctgtg gagcttctgg ctgtgcgaat tcagctggaa 50

<210> 215

<211> 2749

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 1869, 1887

<223> unknown base

<400> 215

ctcccacggt gtccagcgcc cagaatgcgg cttctggtcc tgctatgggg 50

ttgcctgctg ctcccaggtt atgaagccct ggagggccca gaggaaatca 100

gcgggttcga aggggacact gtgtccctgc agtgcaccta cagggaagag 150

ctgagggacc accggaagta ctggtgcagg aagggtgga tcctcttctc 200

tcgctgctct ggcaccatct atgcagaaga agaaggccag gagacaatga 250

agggcaggggt gtccatccgt gacagccgcc aggagctctc gtcattgtg 300

accctgtgga acctcaccct gcaagacgct ggggagtact ggtgtgggg 350

cgaaaaacgg ggccccgatg agtctttact gatctctctg ttctgttttc 400

caggaccctg ctgtcctccc tccccttctc ccaccttcca gcctctggct 450

acaacacgcc tgcagcccaa ggcaaaagct cagcaaacc agccccacgg 500

attgacttct cctgggctct acccggcagc caccacagcc aagcagggga 550

agacaggggc tgaggcccct ccattgccag ggacttccca gtacgggcac 600

gaaaggactt ctcaatcac aggaacctct cctcaccag cgacctctcc 650

tcctgcaggg agtcccgc ccccatgca gctggactcc acctcagcag 700

aggacaccag tccagctctc agcagtggca gctctaagcc cagggtgtcc 750

atcccgatgg tccgcatact ggccccagtc ctggtgctgc tgagccttct 800

gtcagccgca ggctgatcg cttctgcag ccacctgctc ctgtggagaa 850

aggaagctca acaggccacg gagacacaga ggaacgagaa gttctggctc 900

tcacgcttga ctgcggagga aaaggaagcc ccttcccagg cccctgaggg 950

ggacgtgatc tcgatgcctc ccctccacac atctgaggag gagctgggct 1000

tctogaagtt tgtctcagcg tagggcagga ggccctcctg gccaggccag 1050  
cagtgaagca gtatggctgg ctggatcagc accgattccc gaaagctttc 1100  
cacctcagcc tcagagtcca gctgcccgga ctccagggtc ctccccaccc 1150  
tccccaggct ctctcttgc atgttccagc ctgacctaga agcgtttgtc 1200  
agccctggag cccagagcgg tggccttgct cttccggctg gagactggga 1250  
catccctgat aggttcacat ccctgggcag agtaccaggc tgetgaccct 1300  
cagcagggcc agacaaggct cagtggatct ggtctgagtt tcaatctgcc 1350  
aggaactcct gggcctcatg cccagtgtcg gacctgcct tcctcccact 1400  
ccagacccca ccttgtcttc cctccctggc gtctcagac ttagtcccac 1450  
ggtctcctgc atcagctggg gatgaagagg agcatgctgg ggtgagactg 1500  
ggattctggc ttctctttga accacctgca tccagccctt caggaagcct 1550  
gtgaaaaacg tgattcctgg cccaccaag acccaccaa accatctctg 1600  
ggcttggtgc aggactctga attctaacia tgcccagtga ctgtcgact 1650  
tgagtttgag ggccagtggg cctgatgaac gtcacaccc cttcagctta 1700  
gagtctgcat ttgggctgtg acgtctccac ctgcccacat agatctgctc 1750  
tgtctgcgac accagatcca cgtggggact cccctgaggc ctgctaagtc 1800  
caggccttgg tcaggtcagg tgcacattgc aggataagcc caggaccggc 1850  
acagaagtgg ttgcctttnc catttgccct ccctggncca tgccttcttg 1900  
cctttggaaa aaatgatgaa gaaaacctg gctccttcct tgtctggaaa 1950  
gggttacttg cctatgggtt ctgggtggcta gagagaaaag tagaaaacca 2000  
gagtgcacgt aggtgtctaa cacagaggag agtaggaaca gggcggatac 2050  
ctgaaggtga ctccgagtcc agccccctgg agaaggggtc gggggtggtg 2100  
gtaaagtagc acaactacta ttttttttct ttttccatta ttattgtttt 2150  
ttaagacaga atctcgtgct gctgccagg ctggagtga gtggcacgat 2200  
ctgcaaactc cgctcctgg gttcaagtga ttcttctgcc tcagcctccc 2250  
gagtagctgg gattacaggc acgcaccacc acacctggct aatttttgta 2300  
cttttagtag agatgggggtt tcacatgtt ggccaggctg gtcttgaact 2350  
cctgacctca aatgagcctc ctgcttcagt ctcccaaatt gccgggatta 2400  
caggcatgag ccactgtgtc tggccctatt tcctttaaaa agtgaaatta 2450

agagttgttc agtatgcaaa acttggaag atggaggaga aaaagaaaag 2500  
gaagaaaaaa atgtcaccca tagtctcacc agagactatc attatttcgt 2550  
tttgttgtag ttccttccac tcttttcttc ttcacataat ttgccggtgt 2600  
tctttttaca gagcaattat cttgtatata caactttgta tcctgccttt 2650  
tccaccttat cgttccatca ctttattcca gcacttctct gtgtttttaca 2700  
gaccttttta taaataaaat gttcatcagc tgcataaaaa aaaaaaaaaa 2749

<210> 216  
<211> 332  
<212> PRT  
<213> Homo sapiens

<400> 216  
Met Arg Leu Leu Val Leu Leu Trp Gly Cys Leu Leu Leu Pro Gly  
1 5 10 15  
Tyr Glu Ala Leu Glu Gly Pro Glu Glu Ile Ser Gly Phe Glu Gly  
20 25 30  
Asp Thr Val Ser Leu Gln Cys Thr Tyr Arg Glu Glu Leu Arg Asp  
35 40 45  
His Arg Lys Tyr Trp Cys Arg Lys Gly Gly Ile Leu Phe Ser Arg  
50 55 60  
Cys Ser Gly Thr Ile Tyr Ala Glu Glu Glu Gly Gln Glu Thr Met  
65 70 75  
Lys Gly Arg Val Ser Ile Arg Asp Ser Arg Gln Glu Leu Ser Leu  
80 85 90  
Ile Val Thr Leu Trp Asn Leu Thr Leu Gln Asp Ala Gly Glu Tyr  
95 100 105  
Trp Cys Gly Val Glu Lys Arg Gly Pro Asp Glu Ser Leu Leu Ile  
110 115 120  
Ser Leu Phe Val Phe Pro Gly Pro Cys Cys Pro Pro Ser Pro Ser  
125 130 135  
Pro Thr Phe Gln Pro Leu Ala Thr Thr Arg Leu Gln Pro Lys Ala  
140 145 150  
Lys Ala Gln Gln Thr Gln Pro Pro Gly Leu Thr Ser Pro Gly Leu  
155 160 165  
Tyr Pro Ala Ala Thr Thr Ala Lys Gln Gly Lys Thr Gly Ala Glu  
170 175 180  
Ala Pro Pro Leu Pro Gly Thr Ser Gln Tyr Gly His Glu Arg Thr  
185 190 195  
Ser Gln Tyr Thr Gly Thr Ser Pro His Pro Ala Thr Ser Pro Pro

200	205	210
Ala Gly Ser Ser Arg Pro Pro Met Gln	Leu Asp Ser Thr Ser Ala	
215	220	225
Glu Asp Thr Ser Pro Ala Leu Ser Ser	Gly Ser Ser Lys Pro Arg	
230	235	240
Val Ser Ile Pro Met Val Arg Ile Leu	Ala Pro Val Leu Val Leu	
245	250	255
Leu Ser Leu Leu Ser Ala Ala Gly Leu	Ile Ala Phe Cys Ser His	
260	265	270
Leu Leu Leu Trp Arg Lys Glu Ala Gln	Gln Ala Thr Glu Thr Gln	
275	280	285
Arg Asn Glu Lys Phe Trp Leu Ser Arg	Leu Thr Ala Glu Glu Lys	
290	295	300
Glu Ala Pro Ser Gln Ala Pro Glu Gly	Asp Val Ile Ser Met Pro	
305	310	315
Pro Leu His Thr Ser Glu Glu Glu Leu	Gly Phe Ser Lys Phe Val	
320	325	330

Ser Ala

<210> 217

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 217

ccctgcagtg cacctacagg gaag 24

<210> 218

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 218

ctgtcttccc ctgcttggt gtgg 24

<210> 219

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 219  
gggtgcaggaa ggggtgggatac ctcttctctc gctgctctgg ccacatc 47

<210> 220

<211> 950

<212> DNA

<213> Homo sapiens

<400> 220

ttgtgactaa aagctggcct agcaggccag ggagtgcagc tgcaggcgtg 50  
gggggtggcag gagccgcaga gccagagcag acagccgaga aacagggtgga 100  
cagtgtgaaa gaaccagtgg tctcgctctg ttgccaggc tagagtgtac 150  
tggcgtgata atagctcaact gcagcctcag actcctggac ttgagaaatc 200  
ctcctgcctt agcctcctgc atatctggga ctccaggggt gcactcaagc 250  
cctgtttctt ctcttctgt gagtggacca cggaggctgg tgagctgcct 300  
gtcatcccaa agctcagctc tgagccagag tgggtggtggc tccacctctg 350  
ccgccggcat agaagccagg agcagggctc tcagaaggcg gtggtgcca 400  
gctgggatca tgttgttggc cctggtctgt ctgctcagct gcctgctacc 450  
ctccagttag gccaaactct acggtcgttg tgaactggcc agagtgtac 500  
atgacttcgg gctggaagg taccggggat acagcctggc tgactgggtc 550  
tgccttgctt atttcacaag cggtttcaac gcagctgctt tggactacga 600  
ggctgatggg agcaccaaca acgggatctt ccagatcaac agccggaggt 650  
gggtgcagcaa cctcaccocg aacgtcccca acgtgtgccg gatgtactgc 700  
tcagatttgt tgaatocaa tctcaaggat accgttatct gtgccatgaa 750  
gataacccaa gagcctcagg gtctgggtta ctgggaggcc tggaggcatc 800  
actgccaggg aaaagacctc actgaatggg tggatggctg tgacttctag 850  
gatggacgga accatgcaca gcaggctggg aaatgtggtt tggttcctga 900  
cctaggcttg ggaagacaag ccagcgaata aaggatggtt gaacgtgaaa 950

<210> 221

<211> 146

<212> PRT

<213> Homo sapiens

<400> 221

Met	Leu	Leu	Ala	Leu	Val	Cys	Leu	Leu	Ser	Cys	Leu	Leu	Pro	Ser
1				5					10					15
Ser	Glu	Ala	Lys	Leu	Tyr	Gly	Arg	Cys	Glu	Leu	Ala	Arg	Val	Leu
			20						25					30

His	Asp	Phe	Gly	Leu	Asp	Gly	Tyr	Arg	Gly	Tyr	Ser	Leu	Ala	Asp	35	40	45
Trp	Val	Cys	Leu	Ala	Tyr	Phe	Thr	Ser	Gly	Phe	Asn	Ala	Ala	Ala	50	55	60
Leu	Asp	Tyr	Glu	Ala	Asp	Gly	Ser	Thr	Asn	Asn	Gly	Ile	Phe	Gln	65	70	75
Ile	Asn	Ser	Arg	Arg	Trp	Cys	Ser	Asn	Leu	Thr	Pro	Asn	Val	Pro	80	85	90
Asn	Val	Cys	Arg	Met	Tyr	Cys	Ser	Asp	Leu	Leu	Asn	Pro	Asn	Leu	95	100	105
Lys	Asp	Thr	Val	Ile	Cys	Ala	Met	Lys	Ile	Thr	Gln	Glu	Pro	Gln	110	115	120
Gly	Leu	Gly	Tyr	Trp	Glu	Ala	Trp	Arg	His	His	Cys	Gln	Gly	Lys	125	130	135
Asp	Leu	Thr	Glu	Trp	Val	Asp	Gly	Cys	Asp	Phe					140	145	

<210> 222  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 222  
 gggatcatgt tggtggccct ggtc 24

<210> 223  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 223  
 gcaaggcaga cccagtcagc cag 23

<210> 224  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 224  
 ctgcctgcta cctccaagt gaggccaagc tctacggtcg ttgtg 45

<210> 225

<211> 2049  
<212> DNA  
<213> Homo sapiens

<400> 225

agccgctgcc cggggccggg cggccgggc ggcaccatga gtccccgctc 50  
gtgcctgcgt tcgctgcgcc tcctcgtctt cggcgtcttc tcagccgccg 100  
cgagcaactg gctgtacctg gccaaactgt cgtcgggtggg gagcatctca 150  
gaggaggaga cgtgcgagaa actcaagggc ctgatccaga ggcagggtgca 200  
gatgtgcaag cggaacctgg aagtcattga ctccggtgcgc cgcgggtgcc 250  
agctggccat tgaggagtgc cagtaccagt tccggaaccg gcgctggaac 300  
tgctccacac tcgactcctt gcccgctctt ggcaagggtg tgacgcaagg 350  
gactcgggag gcggccttcg tgtacgccat ctcttcggca ggtgtggcct 400  
ttgcagtgc gcgggcgtgc agcagtgggg agctggagaa gtgcggctgt 450  
gacaggacag tgcattgggt cagcccacag ggcttcaggt ggtcaggatg 500  
ctctgacaac atcgccctac gtgtggcctt ctacagtcg tttgtggatg 550  
tgccggagag aagcaagggg gcctcgtcca gcagagccct catgaacctc 600  
cacaacaatg aggcgggcag gaaggccatc ctgacacaca tgcgggtgga 650  
atgcaagtgc cacgggggtgt caggctcctg tgaggtaaag acgtgctggc 700  
gagccgtgcc gcccttcgc cagggtgggt acgcactgaa ggagaagttt 750  
gatggtgcca ctgagggtga gccacgccgc gtgggctcct ccagggcact 800  
ggtaccacgc aacgcacagt tcaagccga cacagatgag gacctggtgt 850  
acttgagacc tagccccgac ttctgtgagc aggacatgcg cagcggcgtg 900  
ctgggcacga ggggocgcac atgcaacaag acgtccaagg ccatcgacgg 950  
ctgtgagctg ctgtgctgtg gccgcggctt ccacacggcg cagggtggagc 1000  
tggtgaaacg ctgcagctgc aaattccact ggtgctgctt cgtcaagtgc 1050  
cggcagtgcc agcggctcgt ggagttgcac acgtgccgat gaccgcctgc 1100  
ctagccctgc gccggcaacc acctagtggc ccagggaagg ccgataattt 1150  
aaacagtctc ccaccaccta cccaagaga tactggttgt attttttgtt 1200  
ctggtttggt ttttggttcc tcatgttatt tattgccga accaggcagg 1250  
caaccccaag ggcaccaacc agggcctccc caaagcctgg gcctttgtgg 1300  
ctgccactga ccaaaggac ctgtcctgtg ccgctggctg cccgcatgtg 1350

gctgccactg accactcagt tgttatctgt gtccgttttt ctacttgcag 1400  
 acctaaggtg gagtaacaag gagtattacc accacatggc tactgaccgt 1450  
 gtcacgcggg aagagggggc cttatggcag ggaaaatagg taccgacttg 1500  
 atggaagtca caccctctgg aaaaaagaac tcttaactct ccagcacaca 1550  
 tacacatgga ctcttggcag cttaggccta gaagccatgt ctctcaaagt 1600  
 ccctgagaaa gggaacaagc agataccagg tcaagggcac caggttcatt 1650  
 tcagccctta catggacagc tagagggttcg atatctgtgg gtccttcag 1700  
 gcaagaagag ggagatgaga gcaagagacg actgaagtcc caccctagaa 1750  
 cccagcctgc cccagcctgc ccctgggaag aggaaactta accactcccc 1800  
 agaccacact aggcaggcat ataggctgcc atcctggacc agggatcccg 1850  
 gctgtgcctt tgcagtcacg ccgagtcac ctttcacagc gctgttcctc 1900  
 catgaaactg aaaaacacac acacacacac acacacacac acacacacac 1950  
 acacacacac ggacacacac acacacctgc gagagagagg gaggaagg 2000  
 ctgtgccttt gcagtcacg ccgagtcacc tttcacagca ctgttcctc 2049

<210> 226

<211> 351

<212> PRT

<213> Homo sapiens

<400> 226

Met	Ser	Pro	Arg	Ser	Cys	Leu	Arg	Ser	Leu	Arg	Leu	Leu	Val	Phe
1				5					10					15
Ala	Val	Phe	Ser	Ala	Ala	Ala	Ser	Asn	Trp	Leu	Tyr	Leu	Ala	Lys
				20					25					30
Leu	Ser	Ser	Val	Gly	Ser	Ile	Ser	Glu	Glu	Glu	Thr	Cys	Glu	Lys
				35					40					45
Leu	Lys	Gly	Leu	Ile	Gln	Arg	Gln	Val	Gln	Met	Cys	Lys	Arg	Asn
				50					55					60
Leu	Glu	Val	Met	Asp	Ser	Val	Arg	Arg	Gly	Ala	Gln	Leu	Ala	Ile
				65					70					75
Glu	Glu	Cys	Gln	Tyr	Gln	Phe	Arg	Asn	Arg	Arg	Trp	Asn	Cys	Ser
				80					85					90
Thr	Leu	Asp	Ser	Leu	Pro	Val	Phe	Gly	Lys	Val	Val	Thr	Gln	Gly
				95					100					105
Thr	Arg	Glu	Ala	Ala	Phe	Val	Tyr	Ala	Ile	Ser	Ser	Ala	Gly	Val
				110					115					120



Ala	Phe	Ala	Val	Thr	Arg	Ala	Cys	Ser	Ser	Gly	Glu	Leu	Glu	Lys	125	130	135
Cys	Gly	Cys	Asp	Arg	Thr	Val	His	Gly	Val	Ser	Pro	Gln	Gly	Phe	140	145	150
Gln	Trp	Ser	Gly	Cys	Ser	Asp	Asn	Ile	Ala	Tyr	Gly	Val	Ala	Phe	155	160	165
Ser	Gln	Ser	Phe	Val	Asp	Val	Arg	Glu	Arg	Ser	Lys	Gly	Ala	Ser	170	175	180
Ser	Ser	Arg	Ala	Leu	Met	Asn	Leu	His	Asn	Asn	Glu	Ala	Gly	Arg	185	190	195
Lys	Ala	Ile	Leu	Thr	His	Met	Arg	Val	Glu	Cys	Lys	Cys	His	Gly	200	205	210
Val	Ser	Gly	Ser	Cys	Glu	Val	Lys	Thr	Cys	Trp	Arg	Ala	Val	Pro	215	220	225
Pro	Phe	Arg	Gln	Val	Gly	His	Ala	Leu	Lys	Glu	Lys	Phe	Asp	Gly	230	235	240
Ala	Thr	Glu	Val	Glu	Pro	Arg	Arg	Val	Gly	Ser	Ser	Arg	Ala	Leu	245	250	255
Val	Pro	Arg	Asn	Ala	Gln	Phe	Lys	Pro	His	Thr	Asp	Glu	Asp	Leu	260	265	270
Val	Tyr	Leu	Glu	Pro	Ser	Pro	Asp	Phe	Cys	Glu	Gln	Asp	Met	Arg	275	280	285
Ser	Gly	Val	Leu	Gly	Thr	Arg	Gly	Arg	Thr	Cys	Asn	Lys	Thr	Ser	290	295	300
Lys	Ala	Ile	Asp	Gly	Cys	Glu	Leu	Leu	Cys	Cys	Gly	Arg	Gly	Phe	305	310	315
His	Thr	Ala	Gln	Val	Glu	Leu	Ala	Glu	Arg	Cys	Ser	Cys	Lys	Phe	320	325	330
His	Trp	Cys	Cys	Phe	Val	Lys	Cys	Arg	Gln	Cys	Gln	Arg	Leu	Val	335	340	345
Glu	Leu	His	Thr	Cys	Arg										350		

<210> 227

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 227

gctgcagctg caaattccac tgg 23

<210> 228  
<211> 28  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 228  
tggtgggaga ctgtttaaat tatcggcc 28

<210> 229  
<211> 41  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 229  
tgcttcgtca agtgccggca gtgccagcgg ctctgggagt t 41

<210> 230  
<211> 1355  
<212> DNA  
<213> Homo sapiens

<400> 230  
cggaacgcgtg ggcggacgcg tgggacggacg cgtgggacgga cgcgtgggct 50  
gggtgcctgc atcgccatgg acaccaccag gtacagcaag tggggcggca 100  
gctccgagga ggtccccgga gggccctggg gacgctgggt gcactggagc 150  
aggagacccc tcttcttggc cctggctgtc ctggtcacca cagtcctttg 200  
ggctgtgatt ctgagtatcc tattgtccaa ggcctccacg gagcgcgcg 250  
cgctgcttga cggccacgac ctgctgagga caaacgcctc gaagcagacg 300  
gcggcgctgg gtgccctgaa ggaggaggctc ggagactgcc acagctgctg 350  
ctcggggacg caggcgcagc tgcagaccac gcgcgcggag cttggggagg 400  
cgcaggcgaa gctgatggag caggagagcg ccctgcggga actgcgtgag 450  
cgcgtgaccc agggcttggc tgaagccggc aggggacgtg agggacgtccg 500  
cactgagctg ttccggggcg tggaggccgt gaggtccag aacaactcct 550  
gcgagccgtg cccacgctg tggctgtcct tcgagggtc ctgctacttt 600  
ttctctgtgc caaagacgac gtgggcgggc gcgcaggatc actgcgcaga 650  
tgccagcgcg cacctgggtga tcgttggggg cctggatgag cagggttcc 700  
tcaactcgaa cacgcgtggc cgtggttact ggctgggcct gagggctgtg 750

cgccatctgg gcaaggttca gggctaccag tgggtggacg gagtctctct 800  
cagcttcagc cactggaacc agggagagcc caatgacgct tgggggcgcg 850  
agaactgtgt catgatgctg cacacggggc tgtggaacga cgcaccgtgt 900  
gacagcgaga aggacggctg gatctgtgag aaaaggcaca actgctgacc 950  
ccgcccagtg ccctggagcc ggcgccattg cagcatgtcg taccctgggg 1000  
gctgctcacc tccctggctc ctggagctga ttgccaaaga gtttttttct 1050  
tcctcatcca ccgtgctga gtctcagaaa cacttggtccc aacatagccc 1100  
tgtccagccc agtgcctggg ctctgggacc tccatgccga cctcatccta 1150  
actccactca cgcagaccca acctaacctc cactagctcc aaaatccctg 1200  
ctcctgcgtc cccgtgatat gcctccactt ctctccctaa ccaagggttag 1250  
gtgactgagg actggagctg tttggttttc tcgcattttc caccaaactg 1300  
gaagctgttt ttgcagcctg aggaagcatc aataaatatt tgagaaatga 1350

aaaaa 1355

<210> 231

<211> 293

<212> PRT

<213> Homo sapiens

<400> 231

Met	Asp	Thr	Thr	Arg	Tyr	Ser	Lys	Trp	Gly	Gly	Ser	Ser	Glu	Glu
1				5					10					15

Val	Pro	Gly	Gly	Pro	Trp	Gly	Arg	Trp	Val	His	Trp	Ser	Arg	Arg
				20					25					30

Pro	Leu	Phe	Leu	Ala	Leu	Ala	Val	Leu	Val	Thr	Thr	Val	Leu	Trp
				35					40					45

Ala	Val	Ile	Leu	Ser	Ile	Leu	Leu	Ser	Lys	Ala	Ser	Thr	Glu	Arg
				50					55					60

Ala	Ala	Leu	Leu	Asp	Gly	His	Asp	Leu	Leu	Arg	Thr	Asn	Ala	Ser
				65					70					75

Lys	Gln	Thr	Ala	Ala	Leu	Gly	Ala	Leu	Lys	Glu	Glu	Val	Gly	Asp
				80					85					90

Cys	His	Ser	Cys	Cys	Ser	Gly	Thr	Gln	Ala	Gln	Leu	Gln	Thr	Thr
				95					100					105

Arg	Ala	Glu	Leu	Gly	Glu	Ala	Gln	Ala	Lys	Leu	Met	Glu	Gln	Glu
				110					115					120

Ser	Ala	Leu	Arg	Glu	Leu	Arg	Glu	Arg	Val	Thr	Gln	Gly	Leu	Ala
				125					130					135

Glu	Ala	Gly	Arg	Gly	Arg	Glu	Asp	Val	Arg	Thr	Glu	Leu	Phe	Arg	
				140					145					150	
Ala	Leu	Glu	Ala	Val	Arg	Leu	Gln	Asn	Asn	Ser	Cys	Glu	Pro	Cys	
				155					160					165	
Pro	Thr	Ser	Trp	Leu	Ser	Phe	Glu	Gly	Ser	Cys	Tyr	Phe	Phe	Ser	
				170					175					180	
Val	Pro	Lys	Thr	Thr	Trp	Ala	Ala	Ala	Gln	Asp	His	Cys	Ala	Asp	
				185					190					195	
Ala	Ser	Ala	His	Leu	Val	Ile	Val	Gly	Gly	Leu	Asp	Glu	Gln	Gly	
				200					205					210	
Phe	Leu	Thr	Arg	Asn	Thr	Arg	Gly	Arg	Gly	Tyr	Trp	Leu	Gly	Leu	
				215					220					225	
Arg	Ala	Val	Arg	His	Leu	Gly	Lys	Val	Gln	Gly	Tyr	Gln	Trp	Val	
				230					235					240	
Asp	Gly	Val	Ser	Leu	Ser	Phe	Ser	His	Trp	Asn	Gln	Gly	Glu	Pro	
				245					250					255	
Asn	Asp	Ala	Trp	Gly	Arg	Glu	Asn	Cys	Val	Met	Met	Leu	His	Thr	
				260					265					270	
Gly	Leu	Trp	Asn	Asp	Ala	Pro	Cys	Asp	Ser	Glu	Lys	Asp	Gly	Trp	
				275					280					285	
Ile	Cys	Glu	Lys	Arg	His	Asn	Cys								
				290											

<210> 232

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 232

gcgagaactg tgtcatgatg ctgc 24

<210> 233

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 233

gtttctgaga ctcagcagcg gtgg 24

<210> 234

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 234

caccgtgtga cagcgagaag gacggctgga tctgtgagaa aaggcacaac 50

<210> 235

<211> 1847

<212> DNA

<213> Homo sapiens

<400> 235

gccaggggaa gaggggtgatc cgacccgggg aaggtcgctg ggcagggcga 50  
gttgggaaag cggcagcccc cgccgcccc gcagcccctt ctctccttt 100  
ctccacgtc ctatctgcct ctcgctggag gccaggccgt gcagcatcga 150  
agacaggagg aactggagcc tcattggccg gccggggcg ccggcctcgg 200  
gcttaaataag gagctccggg ctctggctgg gacccgaccg ctgccggccg 250  
cgctcccgt gtcctgccg ggtgatggaa aacccagcc cggccgccg 300  
cctgggcaag gccctctcg ctctcctct ggccactctc ggcgccgccg 350  
gccagcctct tgggggagag tccatctgtt ccgccagagc cccggccaaa 400  
tacagcatca ctttcaagg caagtggagc cagacggcct tccccaaagca 450  
gtaccccctg ttccgcccc ctgogcagtg gtcttcgctg ctgggggccg 500  
cgcatagctc cgactacagc atgtggagga agaaccagta cgtcagtaac 550  
gggctgcgcg actttgcgga gcgcggcgag gcctgggcgc tgatgaagga 600  
gatcgaggcg gcgggggagg cgctgcagag cgtgcacgag gtgttttcgg 650  
cgcccgccgt cccagcggc accgggcaga cgtcggcgga gctggaggtg 700  
cagcgcaggc actcgctggt ctgitttggt gtgcgcatcg tgcccagccc 750  
cgactggttc gtgggcgtgg acagcctgga cctgtgcgac ggggaccgtt 800  
ggcgggaaca ggcggcgtg gacctgtacc cctacgacgc cgggacggac 850  
agcggcttca cttctctct cccaacttc gccaccatcc cgcaggacac 900  
ggtgaccgag ataacgtcct cctctcccag ccacccggcc aactccttct 950  
actaccgcg gctgaaggcc ctgcctccca tcgccagggt gacactgctg 1000  
cggtgcgac agagccccag ggccttcac cctcccgccc cagtccctgcc 1050  
cagcagggac aatgagattg tagacagcgc ctgagttcca gaaacgccgc 1100

tggactgcga ggtctccctg tggctcgtct ggggactgtg cggaggccac 1150  
 tgtgggaggc tcgggaccaa gagcaggact cgctacgtcc gggccagcc 1200  
 cgccaacaac gggagcccct gccccgagct cgaagaagag gctgagtgcg 1250  
 tccctgataa ctgctgctaa gaccagagcc ccgcagcccc tggggcccc 1300  
 cggagccatg ggggtgtcggg ggctcctgtg caggctcatg ctgcaggcgg 1350  
 ccgagggcac aggggggttc gcgctgctcc tgaccgcggt gaggccgcgc 1400  
 cgaccatctc tgcactgaag ggccctctgg tggccggcac gggcattggg 1450  
 aaacagcctc ctccctttccc aaccttgctt cttagggggc cccgtgtccc 1500  
 gtctgtctc agcctcctcc tctgcagga taaagtcac cccaaggctc 1550  
 cagctactct aaattatgtc tcttataag ttattgtgc tccaggagat 1600  
 tgtccttcat cgtccagggg cctggctccc acgtggttgc agatacctca 1650  
 gacctggtgc tctaggctgt gctgagccca ctctcccgag ggcgcacca 1700  
 agcggggggc acttgagaag tgaataaatg gggcggttcc ggaagcgtca 1750  
 gtgtttccat gttatggatc tctctgcgtt tgaataaaga ctatctctgt 1800  
 tgctcacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaa 1847

<210> 236

<211> 331

<212> PRT

<213> Homo sapiens

<400> 236

Met	Glu	Asn	Pro	Ser	Pro	Ala	Ala	Ala	Leu	Gly	Lys	Ala	Leu	Cys
1				5					10					15
Ala	Leu	Leu	Leu	Ala	Thr	Leu	Gly	Ala	Ala	Gly	Gln	Pro	Leu	Gly
				20					25					30
Gly	Glu	Ser	Ile	Cys	Ser	Ala	Arg	Ala	Pro	Ala	Lys	Tyr	Ser	Ile
				35					40					45
Thr	Phe	Thr	Gly	Lys	Trp	Ser	Gln	Thr	Ala	Phe	Pro	Lys	Gln	Tyr
				50					55					60
Pro	Leu	Phe	Arg	Pro	Pro	Ala	Gln	Trp	Ser	Ser	Leu	Leu	Gly	Ala
				65					70					75
Ala	His	Ser	Ser	Asp	Tyr	Ser	Met	Trp	Arg	Lys	Asn	Gln	Tyr	Val
				80					85					90
Ser	Asn	Gly	Leu	Arg	Asp	Phe	Ala	Glu	Arg	Gly	Glu	Ala	Trp	Ala
				95					100					105
Leu	Met	Lys	Glu	Ile	Glu	Ala	Ala	Gly	Glu	Ala	Leu	Gln	Ser	Val

110										115					120				
His	Glu	Val	Phe	Ser	Ala	Pro	Ala	Val	Pro	Ser	Gly	Thr	Gly	Gln					
				125					130					135					
Thr	Ser	Ala	Glu	Leu	Glu	Val	Gln	Arg	Arg	His	Ser	Leu	Val	Ser					
				140					145					150					
Phe	Val	Val	Arg	Ile	Val	Pro	Ser	Pro	Asp	Trp	Phe	Val	Gly	Val					
				155					160					165					
Asp	Ser	Leu	Asp	Leu	Cys	Asp	Gly	Asp	Arg	Trp	Arg	Glu	Gln	Ala					
				170					175					180					
Ala	Leu	Asp	Leu	Tyr	Pro	Tyr	Asp	Ala	Gly	Thr	Asp	Ser	Gly	Phe					
				185					190					195					
Thr	Phe	Ser	Ser	Pro	Asn	Phe	Ala	Thr	Ile	Pro	Gln	Asp	Thr	Val					
				200					205					210					
Thr	Glu	Ile	Thr	Ser	Ser	Ser	Pro	Ser	His	Pro	Ala	Asn	Ser	Phe					
				215					220					225					
Tyr	Tyr	Pro	Arg	Leu	Lys	Ala	Leu	Pro	Pro	Ile	Ala	Arg	Val	Thr					
				230					235					240					
Leu	Leu	Arg	Leu	Arg	Gln	Ser	Pro	Arg	Ala	Phe	Ile	Pro	Pro	Ala					
				245					250					255					
Pro	Val	Leu	Pro	Ser	Arg	Asp	Asn	Glu	Ile	Val	Asp	Ser	Ala	Ser					
				260					265					270					
Val	Pro	Glu	Thr	Pro	Leu	Asp	Cys	Glu	Val	Ser	Leu	Trp	Ser	Ser					
				275					280					285					
Trp	Gly	Leu	Cys	Gly	Gly	His	Cys	Gly	Arg	Leu	Gly	Thr	Lys	Ser					
				290					295					300					
Arg	Thr	Arg	Tyr	Val	Arg	Val	Gln	Pro	Ala	Asn	Asn	Gly	Ser	Pro					
				305					310					315					
Cys	Pro	Glu	Leu	Glu	Glu	Glu	Ala	Glu	Cys	Val	Pro	Asp	Asn	Cys					
				320					325					330					

Val

<210> 237

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 237

cagcactgcc aggggaagag gg 22

<210> 238  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 238  
 caggactcgc tacgtccg 18  
  
 <210> 239  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 239  
 cagccccttc tcctcctttc tccc 24  
  
 <210> 240  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 240  
 gcagttatca gggacgcact cagcc 25  
  
 <210> 241  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 241  
 ccagcgagag gcagatag 18  
  
 <210> 242  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 242  
 cggtcaccgt gtctgcggg atg 23  
  
 <210> 243  
 <211> 42  
 <212> DNA



<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 243

cagccccttc tctctctttc tcccacgtcc tatctgcctc tc 42

<210> 244

<211> 1894

<212> DNA

<213> Homo sapiens

<400> 244

ggcggcgtcc gtgaggggct cctttgggca ggggtagtgt ttggtgtccc 50  
tgtcttgctg gatattgaca aactgaagct ttctgcacc actggactta 100  
aggaagagtg tactcgtagg cggacagctt tagtggccgg ccggccgctc 150  
tcattccccg taaggagcag agtcctttgt actgaccaag atgagcaaca 200  
tctacatcca ggagcctccc acgaatggga aggttttatt gaaaactaca 250  
gctggagata ttgacataga gttgtggtcc aaagaagctc ctaaagcttg 300  
cagaaatfff atccaactff gtttggaagc ttattatgac aataccattt 350  
ttcatagagt tgtgcctggt ttcatagtcc aaggcggaga tcctactggc 400  
acagggagtg gtggagagtc tatctatgga gcgccattca aagatgaatt 450  
tcattcacgg ttgcgtttta atcggagagg actggttgcc atggcaaagt 500  
ctggtttctca tgataatggc agccagtttt tcttcacact gggtcgagca 550  
gatgaactta acaataagca taccatcttt ggaaagggtta caggggatac 600  
agtatataac atgttgcgac tgtcagaagt agacattgat gatgacgaaa 650  
gaccacataa tccacacaaa ataaaaagct gtgaggtttt gtttaatcct 700  
tttgatgaca tcattccaag ggaaattaaa aggctgaaaa aagagaaacc 750  
agaggaggaa gtaaagaaat tgaaacccaa aggcacaaaa aattttagtt 800  
tactttcatt tggagaggaa gctgaggaag aagaggagga agtaaatacga 850  
gttagtcaga gcatgaaggc caaaagcaaa agtagtcatt acttgcttaa 900  
ggatgatcca catctcagtt ctgttccagt ttagaaaagt gaaaaagggtg 950  
atgcaccaga tttagttgat gatggagaag atgaaagtgc agagcatgat 1000  
gaatatattg atggtgatga aaagaacctg atgagagaaa gaattgcca 1050  
aaaattaaaa aaggacacaa gtgcgaatgt taaatcagct ggagaaggag 1100

aagtggagaa gaaatcagtc agccgcagtg aagagctcag aaaagaagca 1150  
agacaattaa aacgggaact cttagcagca aaacaaaaaa aagtagaaaa 1200  
tgcagcaaaa caagcagaaa aaagaagtga agaggaagaa gcccctccag 1250  
atggtgctgt tgccgaatac agaagagaaa agcaaaagta tgaagctttg 1300  
aggaagcaac agtcaaagaa gggaacttcc cgggaagatc agacccttgc 1350  
actgctgaac cagtttaaact ctaaactcac tcaagcaatt gctgaaacac 1400  
ctgaaaatga cattcctgaa acagaagtag aagatgatga aggatggatg 1450  
tcacatgtac ttcagtttga ggataaaagc agaaaagtga aagatgcaag 1500  
catgcaagac tcagatacat ttgaaatcta tgatcctcgg aatccagtga 1550  
ataaaagaag gaggggaagaa agcaaaaagc tgatgagaga gaaaaaagaa 1600  
agaagataaa atgagaataa tgataaccag aacttgctgg aaatgtgcct 1650  
acaatggcct tgtaacagcc attgttccca acagcatcac ttaggggtgt 1700  
gaaaagaagt atttttgaac ctgttgtctg gttttgaaaa acaattatct 1750  
tgttttgcaa attgtggaat gatgtaagca aatgcttttg gttactggta 1800  
catgtgtttt ttcctagctg accttttata ttgctaaatc tgaaataaaa 1850  
taactttcct tccacaaaaa aaaaaaaaaa aaaaaaaaaa aaaa 1894

<210> 245

<211> 472

<212> PRT

<213> Homo sapiens

<400> 245

Met	Ser	Asn	Ile	Tyr	Ile	Gln	Glu	Pro	Pro	Thr	Asn	Gly	Lys	Val
1				5					10					15
Leu	Leu	Lys	Thr	Thr	Ala	Gly	Asp	Ile	Asp	Ile	Glu	Leu	Trp	Ser
			20					25						30
Lys	Glu	Ala	Pro	Lys	Ala	Cys	Arg	Asn	Phe	Ile	Gln	Leu	Cys	Leu
			35					40						45
Glu	Ala	Tyr	Tyr	Asp	Asn	Thr	Ile	Phe	His	Arg	Val	Val	Pro	Gly
			50					55						60
Phe	Ile	Val	Gln	Gly	Gly	Asp	Pro	Thr	Gly	Thr	Gly	Ser	Gly	Gly
			65					70						75
Glu	Ser	Ile	Tyr	Gly	Ala	Pro	Phe	Lys	Asp	Glu	Phe	His	Ser	Arg
			80					85						90
Leu	Arg	Phe	Asn	Arg	Arg	Gly	Leu	Val	Ala	Met	Ala	Asn	Ala	Gly
			95					100						105

Ser	His	Asp	Asn	Gly	Ser	Gln	Phe	Phe	Phe	Thr	Leu	Gly	Arg	Ala	110	115	120
Asp	Glu	Leu	Asn	Asn	Lys	His	Thr	Ile	Phe	Gly	Lys	Val	Thr	Gly	125	130	135
Asp	Thr	Val	Tyr	Asn	Met	Leu	Arg	Leu	Ser	Glu	Val	Asp	Ile	Asp	140	145	150
Asp	Asp	Glu	Arg	Pro	His	Asn	Pro	His	Lys	Ile	Lys	Ser	Cys	Glu	155	160	165
Val	Leu	Phe	Asn	Pro	Phe	Asp	Asp	Ile	Ile	Pro	Arg	Glu	Ile	Lys	170	175	180
Arg	Leu	Lys	Lys	Glu	Lys	Pro	Glu	Glu	Glu	Val	Lys	Lys	Leu	Lys	185	190	195
Pro	Lys	Gly	Thr	Lys	Asn	Phe	Ser	Leu	Leu	Ser	Phe	Gly	Glu	Glu	200	205	210
Ala	Glu	Glu	Glu	Glu	Glu	Glu	Val	Asn	Arg	Val	Ser	Gln	Ser	Met	215	220	225
Lys	Gly	Lys	Ser	Lys	Ser	Ser	His	Asp	Leu	Leu	Lys	Asp	Asp	Pro	230	235	240
His	Leu	Ser	Ser	Val	Pro	Val	Val	Glu	Ser	Glu	Lys	Gly	Asp	Ala	245	250	255
Pro	Asp	Leu	Val	Asp	Asp	Gly	Glu	Asp	Glu	Ser	Ala	Glu	His	Asp	260	265	270
Glu	Tyr	Ile	Asp	Gly	Asp	Glu	Lys	Asn	Leu	Met	Arg	Glu	Arg	Ile	275	280	285
Ala	Lys	Lys	Leu	Lys	Lys	Asp	Thr	Ser	Ala	Asn	Val	Lys	Ser	Ala	290	295	300
Gly	Glu	Gly	Glu	Val	Glu	Lys	Lys	Ser	Val	Ser	Arg	Ser	Glu	Glu	305	310	315
Leu	Arg	Lys	Glu	Ala	Arg	Gln	Leu	Lys	Arg	Glu	Leu	Leu	Ala	Ala	320	325	330
Lys	Gln	Lys	Lys	Val	Glu	Asn	Ala	Ala	Lys	Gln	Ala	Glu	Lys	Arg	335	340	345
Ser	Glu	Glu	Glu	Glu	Ala	Pro	Pro	Asp	Gly	Ala	Val	Ala	Glu	Tyr	350	355	360
Arg	Arg	Glu	Lys	Gln	Lys	Tyr	Glu	Ala	Leu	Arg	Lys	Gln	Gln	Ser	365	370	375
Lys	Lys	Gly	Thr	Ser	Arg	Glu	Asp	Gln	Thr	Leu	Ala	Leu	Leu	Asn	380	385	390
Gln	Phe	Lys	Ser	Lys	Leu	Thr	Gln	Ala	Ile	Ala	Glu	Thr	Pro	Glu			

395	400	405
Asn Asp Ile Pro Glu Thr Glu Val Glu	Asp Asp Glu Gly Trp Met	
410	415	420
Ser His Val Leu Gln Phe Glu Asp Lys	Ser Arg Lys Val Lys Asp	
425	430	435
Ala Ser Met Gln Asp Ser Asp Thr Phe	Glu Ile Tyr Asp Pro Arg	
440	445	450
Asn Pro Val Asn Lys Arg Arg Arg Glu	Glu Ser Lys Lys Leu Met	
455	460	465
Arg Glu Lys Lys Glu Arg Arg		
470		

<210> 246

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 246

tgcgagatc ctactggcac aggg 24

<210> 247

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 247

cgagttatgc agagcatg 18

<210> 248

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 248

cagatggtgc tggtgccg 18

<210> 249

<211> 29

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 249  
caactggaac aggaactgag atgtggatc 29

<210> 250

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 250

ctggttcagc agtgcaaggg tctg 24

<210> 251

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 251

cctctccgat taaaacgc 18

<210> 252

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 252

gagaggactg gttgccatgg caaatgctgg ttctcatgat aatgg 45

<210> 253

<211> 2456

<212> DNA

<213> Homo sapiens

<400> 253

cgccgccggtt ggggctggaa gttcccgcca ggtccgtgcc gggcgagaga 50

gatgctgccc ggcccgctc ggctttgagg cgagagaagt gtcccagacc 100

catttcgcct tgctgacggc gtogagccct ggccagacat gtccacaggg 150

ttctccttcg ggtccgggac tctgggctcc accaccgtgg ccgccggcgg 200

gaccagcaca ggcggcggtt tctccttcgg aacgggaacg tctagcaacc 250

cttctgtggg gctcaatttt ggaaatcttg gaagtacttc aactccagca 300

actacatctg ctctttcaag tggttttgga accgggctct ttggatctaa 350

acctgccact ggggttcactc taggaggaac aaatacaggt gccttgca 400

ccaagaggcc tcaagtggc accaaatat gaaccctgca aggaaaacag 450  
 atgcatgtgg ggaagacacc catccaagtc tttttaggag tccccttctc 500  
 cagacctcct ctaggtatcc tcaggtttgc acctccagaa cccccggagc 550  
 cctggaaagg aatcagagat gctaccacct acccgctgg atggagtctc 600  
 gctctgtcgc caggctggag tgcagtggca cgatctcggc tcaactgcaac 650  
 ctccgcctcc cgggttcaag cgagtctcct gcctcagcct ctgagtgtct 700  
 ggggctacag gtgcctgcag gagtctggg gccagctggc ctcgatgtac 750  
 gtcagcacgc gggaaacggt caagtggctg cgcttcagcg aggactgtct 800  
 gtacctgaac gtgtacgcgc cggcgcgcg gcccggggat cccagctgc 850  
 cagtgatggc ctggttcccg ggaggcgct tcatcgtgg cgctgcttct 900  
 tcgtacgagg gctctgactt ggccgcccgc gagaaagtgg tgctggtgtt 950  
 tctgcagcac aggcctcggc tcttcggctt cctgagcac gacgacagcc 1000  
 acgcgcgcgg gaactggggg ctgctggacc agatggcggc tctgcgctgg 1050  
 gtgcaggaga acatcgcagc cttcggggga gaccagga atgtgaccct 1100  
 gttcggccag tcggcggggg ccatgagcat ctcaggactg atgatgtcac 1150  
 ccctagcctc ggggtctctc catcggggca tttcccagag tggcaccgcg 1200  
 ttattcagac ttttcatcac tagtaacca ctgaaagtgg ccaagaaggt 1250  
 tgcccacctg gctggatgca accacaacag cacacagatc ctggtaaact 1300  
 gcctgagggc actatcagg accaaggtga tgcgtgtgtc caacaagatg 1350  
 agattcctcc aactgaactt ccagagagac ccggaagaga ttatctggtc 1400  
 catgagccct gtggtggatg gtgtggtgat cccagatgac ctttgggtgc 1450  
 tctgaccca ggggaaggtt tcatctgtgc cctaccttct aggtgtcaac 1500  
 aacctggaat tcaattggct cttgccttat aatatcacca aggagcaggt 1550  
 accacttggt gtggaggagt acctggacaa tgtcaatgag catgactgga 1600  
 agatgctacg aaaccgtatg atggacatag ttcaagatgc cactttcgtg 1650  
 tatgccacac tgcagactgc tcaactacc cgagaaacc caatgatggg 1700  
 aatctgcct gctggccacg ctacaacaag gatgaaaagt acctgcagct 1750  
 ggattttacc acaagagtgg gcatgaagct caaggagaag aagatggctt 1800  
 tttgatgag tctgtaccag tctcaaagac ctgagaagca gaggcaattc 1850

taaggggtggc tatgcaggaa ggagccaaag aggggtttgc ccccaccatc 1900  
 caggccctgg ggagactagc catggacata cctggggaca agagttctac 1950  
 ccaccccagt ttagaactgc aggagctccc tgctgcctcc aggccaaagc 2000  
 tagagctttt gcctgtttg tgggacctgc actgcccttt ccagcctgac 2050  
 atcccatgat gcccctctac ttcactgttg acatccagtt aggccaggcc 2100  
 ctgtcaacac cacactgtgc tcagctctcc agcctcagga caacctcttt 2150  
 ttttcccttc ttcaaactct cccacccttc aatgtctcct tgtgactcct 2200  
 tcttatggga ggtcgacca gactgccact gcccctgtca ctgcaccag 2250  
 cttggcattt accatccatc ctgctcaacc ttgttcctgt ctgttcacat 2300  
 tggcctggag gcctagggca ggttgtgaca tggagcaaac ttttgtagt 2350  
 ttgggatctt ctctccacc cacacttacc tccccaggg ccactccaaa 2400  
 gtctatacac aggggtggtc tcttcaataa agaagtgttg attagaaaaa 2450  
 aaaaaa 2456

<210> 254  
 <211> 545  
 <212> PRT  
 <213> Homo sapiens

<400> 254

Met	Ser	Thr	Gly	Phe	Ser	Phe	Gly	Ser	Gly	Thr	Leu	Gly	Ser	Thr	1	5	10	15
Thr	Val	Ala	Ala	Gly	Gly	Thr	Ser	Thr	Gly	Gly	Val	Phe	Ser	Phe	20	25	30	
Gly	Thr	Gly	Thr	Ser	Ser	Asn	Pro	Ser	Val	Gly	Leu	Asn	Phe	Gly	35	40	45	
Asn	Leu	Gly	Ser	Thr	Ser	Thr	Pro	Ala	Thr	Thr	Ser	Ala	Pro	Ser	50	55	60	
Ser	Gly	Phe	Gly	Thr	Gly	Leu	Phe	Gly	Ser	Lys	Pro	Ala	Thr	Gly	65	70	75	
Phe	Thr	Leu	Gly	Gly	Thr	Asn	Thr	Gly	Ala	Leu	His	Thr	Lys	Arg	80	85	90	
Pro	Gln	Val	Val	Thr	Lys	Tyr	Gly	Thr	Leu	Gln	Gly	Lys	Gln	Met	95	100	105	
His	Val	Gly	Lys	Thr	Pro	Ile	Gln	Val	Phe	Leu	Gly	Val	Pro	Phe	110	115	120	
Ser	Arg	Pro	Pro	Leu	Gly	Ile	Leu	Arg	Phe	Ala	Pro	Pro	Glu	Pro	125	130	135	

Pro	Glu	Pro	Trp	Lys	Gly	Ile	Arg	Asp	Ala	Thr	Thr	Tyr	Pro	Pro	
				140					145					150	
Gly	Trp	Ser	Leu	Ala	Leu	Ser	Pro	Gly	Trp	Ser	Ala	Val	Ala	Arg	
				155					160					165	
Ser	Arg	Leu	Thr	Ala	Thr	Ser	Ala	Ser	Arg	Val	Gln	Ala	Ser	Leu	
				170					175					180	
Leu	Pro	Gln	Pro	Leu	Ser	Val	Trp	Gly	Tyr	Arg	Cys	Leu	Gln	Glu	
				185					190					195	
Ser	Trp	Gly	Gln	Leu	Ala	Ser	Met	Tyr	Val	Ser	Thr	Arg	Glu	Arg	
				200					205					210	
Tyr	Lys	Trp	Leu	Arg	Phe	Ser	Glu	Asp	Cys	Leu	Tyr	Leu	Asn	Val	
				215					220					225	
Tyr	Ala	Pro	Ala	Arg	Ala	Pro	Gly	Asp	Pro	Gln	Leu	Pro	Val	Met	
				230					235					240	
Val	Trp	Phe	Pro	Gly	Gly	Ala	Phe	Ile	Val	Gly	Ala	Ala	Ser	Ser	
				245					250					255	
Tyr	Glu	Gly	Ser	Asp	Leu	Ala	Ala	Arg	Glu	Lys	Val	Val	Leu	Val	
				260					265					270	
Phe	Leu	Gln	His	Arg	Leu	Gly	Ile	Phe	Gly	Phe	Leu	Ser	Thr	Asp	
				275					280					285	
Asp	Ser	His	Ala	Arg	Gly	Asn	Trp	Gly	Leu	Leu	Asp	Gln	Met	Ala	
				290					295					300	
Ala	Leu	Arg	Trp	Val	Gln	Glu	Asn	Ile	Ala	Ala	Phe	Gly	Gly	Asp	
				305					310					315	
Pro	Gly	Asn	Val	Thr	Leu	Phe	Gly	Gln	Ser	Ala	Gly	Ala	Met	Ser	
				320					325					330	
Ile	Ser	Gly	Leu	Met	Met	Ser	Pro	Leu	Ala	Ser	Gly	Leu	Phe	His	
				335					340					345	
Arg	Ala	Ile	Ser	Gln	Ser	Gly	Thr	Ala	Leu	Phe	Arg	Leu	Phe	Ile	
				350					355					360	
Thr	Ser	Asn	Pro	Leu	Lys	Val	Ala	Lys	Lys	Val	Ala	His	Leu	Ala	
				365					370					375	
Gly	Cys	Asn	His	Asn	Ser	Thr	Gln	Ile	Leu	Val	Asn	Cys	Leu	Arg	
				380					385					390	
Ala	Leu	Ser	Gly	Thr	Lys	Val	Met	Arg	Val	Ser	Asn	Lys	Met	Arg	
				395					400					405	
Phe	Leu	Gln	Leu	Asn	Phe	Gln	Arg	Asp	Pro	Glu	Glu	Ile	Ile	Trp	
				410					415					420	
Ser	Met	Ser	Pro	Val	Val	Asp	Gly	Val	Val	Ile	Pro	Asp	Asp	Pro	



425	430	435
Leu Val Leu Leu Thr Gln Gly Lys Val	Ser Ser Val Pro Tyr Leu	
440	445	450
Leu Gly Val Asn Asn Leu Glu Phe Asn	Trp Leu Leu Pro Tyr Asn	
455	460	465
Ile Thr Lys Glu Gln Val Pro Leu Val	Val Glu Glu Tyr Leu Asp	
470	475	480
Asn Val Asn Glu His Asp Trp Lys Met	Leu Arg Asn Arg Met Met	
485	490	495
Asp Ile Val Gln Asp Ala Thr Phe Val	Tyr Ala Thr Leu Gln Thr	
500	505	510
Ala His Tyr His Arg Glu Thr Pro Met	Met Gly Ile Cys Pro Ala	
515	520	525
Gly His Ala Thr Thr Arg Met Lys Ser	Thr Cys Ser Trp Ile Leu	
530	535	540
Pro Gln Glu Trp Ala		
545		

<210> 255  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 255  
 aggtgcctgc aggagtcctg ggg 23

<210> 256  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 256  
 ccacctcagg aagccgaaga tgcc 24

<210> 257  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 257  
 gaacggtaca agtggctgcg cttcagcgag gactgtctgt acctg 45

<210> 258  
<211> 2764  
<212> DNA  
<213> Homo sapiens

<400> 258  
gagaacaggc ctgtctcagg caggccctgc gcctcctatg cggagatgct 50  
actgccactg ctgctgtcct cgctgctggg cgggtcccag gctatggatg 100  
ggagattctg gatacgagtg caggagtcag tgatgggtgcc ggagggcctg 150  
tgcattctctg tgccctgctc tttctcctac ccccgacaag actggacagg 200  
gtctacccca gcttatggct actgggttcaa agcagtgact gagacaacca 250  
agggtgctcc tgtggccaca aaccaccaga gtcgagaggt ggaaatgagc 300  
acccgggggc gattccagct cactggggat cccgccaagg ggaactgctc 350  
cttggtgatc agagacgcgc agatgcagga tgagtacacag tacttctttc 400  
gggtggagag aggaagctat gtgacatata atttcatgaa cgatgggttc 450  
tttctaaaag taacagtgtc cagcttcacg cccagacccc aggaccacaa 500  
caccgacctc acctgccatg tggacttctc cagaaagggt gtgagcgcac 550  
agaggaccgt ccgactccgt gtggcctatg ccccagaga ccttggtatc 600  
agcatttcac gtgacaacac gccagccctg gagccccagc cccagggaaa 650  
tgtcccatc ctggaagccc aaaaaggcca gttcctgcgg ctctctgtg 700  
ctgctgacag ccagccccct gccacactga gctgggtcct gcagaacaga 750  
gtcctctcct cgtcccatcc ctggggccct agaccctgg ggctggagct 800  
gcccggggtg aaggctgggg attcagggcg ctacacctgc cgagcggaga 850  
acaggcttgg ctcccagcag cgagccctgg acctctctgt gcagtatcct 900  
ccagagaacc tgagagtgat ggtttcccaa gcaaacagga cagtcctgga 950  
aaaccttggg aacggcacgt ctctcccagt actggagggc caaagcctgt 1000  
gcctgggtctg tgtcacacac agcagcccc cagccaggct gagctggacc 1050  
cagaggggac aggttctgag cccctccag ccctcagacc ccggggtcct 1100  
ggagctgcct cgggttcaag tggagcacga aggagagttc acctgccacg 1150  
ctcggcacc actgggctcc cagcacgtct ctctcagcct ctccgtgcac 1200  
tataagaagg gactcatctc aacggcattc tccaacggag cgtttctggg 1250  
aatcggcatc acggtctctc ttttctctg cctggccctg atcatcatga 1300

agattctacc gaagagacgg actcagacag aaaccccgag gccaggttc 1350  
 tcccggcaca gcacgatacct ggattacatc aatgtggtcc cgacggctgg 1400  
 ccccttggtc cagaagcgga atcagaaagc cacaccaaac agtcctcgga 1450  
 cccctcctcc accaggtgct ccctccccag aatcaaagaa gaaccagaaa 1500  
 aagcagtatc agttgccag tttccagaa cccaaatcat cactcaagc 1550  
 cccagaatcc caggagagcc aagaggagct ccattatgcc acgtcaact 1600  
 tccaggcgt cagaccagc cctgaggccc ggatgccaa gggcaccag 1650  
 gcggattatg cagaagtcaa gttccaatga gggctcttta ggcttttaga 1700  
 ctgggacttc ggctagggag gaaggtagag taagaggttg aagataacag 1750  
 agtgcaaagt ttctttctct ccctctctct ctctctttct ctctctctct 1800  
 ctctttctct ctcttttaaa aaaacatctg gccagggcac agtggctcac 1850  
 gcctgtaatc ccagcacttt gggagggtga ggtgggcaga tcgcctgagg 1900  
 tcgggagttc gagaccagcc tggccaactt ggtgaaacc cgtctctact 1950  
 aaaaatacaa aaattagctg ggcattggtg caggcgctg taatcctacc 2000  
 tacttgggaa gctgaggcag gagaatcact tgaacctggg agacggaggt 2050  
 tgcagtgagc caagatcaca ccattgcacg ccagcctggg caacaaagcg 2100  
 agactccatc tcaaaaaaaaa aatcctccaa atggggtggg tgtctgtaat 2150  
 cccagcactt tgggaggcta aggtgggtgg attgcttgag cccaggagtt 2200  
 cgagaccagc ctgggcaaca tggtgaaacc ccatctctac aaaaaatata 2250  
 aaacatagct gggcttggtg gtgtgtgcct gtagtcccag ctgtcagaca 2300  
 tttaaaccag agcaactcca tctggaatag gagctgaata aaatgaggct 2350  
 gagacctact gggctgcatt ctcagacagt ggaggcattc taagtcacag 2400  
 gatgagacag gaggtccgta caagatacag gtcataaaga ctttgctgat 2450  
 aaaacagatt gcagtaaaga agccaaccaa atcccaccaa aaccaagttg 2500  
 gccacgagag tgacctctgg tgcctctcac tgctacactc ctgacagcac 2550  
 catgacagtt tacaatatgcc atggcaacat caggaagtta cccgatatgt 2600  
 cccaaaaggg ggaggaatga ataatccacc ccttgtttag caaataagca 2650  
 agaaataacc ataaaagtgg gcaaccagca gctctaggcg ctgctcttgt 2700  
 ctatggagta gccattcttt tgttccttta ctttcttaat aaacttgctt 2750

tcacottaaa aaaa 2764

<210> 259

<211> 544

<212> PRT

<213> Homo sapiens

<400> 259

Met	Leu	Leu	Pro	Leu	Leu	Leu	Ser	Ser	Leu	Leu	Gly	Gly	Ser	Gln
1				5					10					15
Ala	Met	Asp	Gly	Arg	Phe	Trp	Ile	Arg	Val	Gln	Glu	Ser	Val	Met
				20					25					30
Val	Pro	Glu	Gly	Leu	Cys	Ile	Ser	Val	Pro	Cys	Ser	Phe	Ser	Tyr
				35					40					45
Pro	Arg	Gln	Asp	Trp	Thr	Gly	Ser	Thr	Pro	Ala	Tyr	Gly	Tyr	Trp
				50					55					60
Phe	Lys	Ala	Val	Thr	Glu	Thr	Thr	Lys	Gly	Ala	Pro	Val	Ala	Thr
				65					70					75
Asn	His	Gln	Ser	Arg	Glu	Val	Glu	Met	Ser	Thr	Arg	Gly	Arg	Phe
				80					85					90
Gln	Leu	Thr	Gly	Asp	Pro	Ala	Lys	Gly	Asn	Cys	Ser	Leu	Val	Ile
				95					100					105
Arg	Asp	Ala	Gln	Met	Gln	Asp	Glu	Ser	Gln	Tyr	Phe	Phe	Arg	Val
				110					115					120
Glu	Arg	Gly	Ser	Tyr	Val	Thr	Tyr	Asn	Phe	Met	Asn	Asp	Gly	Phe
				125					130					135
Phe	Leu	Lys	Val	Thr	Val	Leu	Ser	Phe	Thr	Pro	Arg	Pro	Gln	Asp
				140					145					150
His	Asn	Thr	Asp	Leu	Thr	Cys	His	Val	Asp	Phe	Ser	Arg	Lys	Gly
				155					160					165
Val	Ser	Ala	Gln	Arg	Thr	Val	Arg	Leu	Arg	Val	Ala	Tyr	Ala	Pro
				170					175					180
Arg	Asp	Leu	Val	Ile	Ser	Ile	Ser	Arg	Asp	Asn	Thr	Pro	Ala	Leu
				185					190					195
Glu	Pro	Gln	Pro	Gln	Gly	Asn	Val	Pro	Tyr	Leu	Glu	Ala	Gln	Lys
				200					205					210
Gly	Gln	Phe	Leu	Arg	Leu	Leu	Cys	Ala	Ala	Asp	Ser	Gln	Pro	Pro
				215					220					225
Ala	Thr	Leu	Ser	Trp	Val	Leu	Gln	Asn	Arg	Val	Leu	Ser	Ser	Ser
				230					235					240
His	Pro	Trp	Gly	Pro	Arg	Pro	Leu	Gly	Leu	Glu	Leu	Pro	Gly	Val
				245					250					255

Lys	Ala	Gly	Asp	Ser	Gly	Arg	Tyr	Thr	Cys	Arg	Ala	Glu	Asn	Arg	
				260					265					270	
Leu	Gly	Ser	Gln	Gln	Arg	Ala	Leu	Asp	Leu	Ser	Val	Gln	Tyr	Pro	
				275					280					285	
Pro	Glu	Asn	Leu	Arg	Val	Met	Val	Ser	Gln	Ala	Asn	Arg	Thr	Val	
				290					295					300	
Leu	Glu	Asn	Leu	Gly	Asn	Gly	Thr	Ser	Leu	Pro	Val	Leu	Glu	Gly	
				305					310					315	
Gln	Ser	Leu	Cys	Leu	Val	Cys	Val	Thr	His	Ser	Ser	Pro	Pro	Ala	
				320					325					330	
Arg	Leu	Ser	Trp	Thr	Gln	Arg	Gly	Gln	Val	Leu	Ser	Pro	Ser	Gln	
				335					340					345	
Pro	Ser	Asp	Pro	Gly	Val	Leu	Glu	Leu	Pro	Arg	Val	Gln	Val	Glu	
				350					355					360	
His	Glu	Gly	Glu	Phe	Thr	Cys	His	Ala	Arg	His	Pro	Leu	Gly	Ser	
				365					370					375	
Gln	His	Val	Ser	Leu	Ser	Leu	Ser	Val	His	Tyr	Lys	Lys	Gly	Leu	
				380					385					390	
Ile	Ser	Thr	Ala	Phe	Ser	Asn	Gly	Ala	Phe	Leu	Gly	Ile	Gly	Ile	
				395					400					405	
Thr	Ala	Leu	Leu	Phe	Leu	Cys	Leu	Ala	Leu	Ile	Ile	Met	Lys	Ile	
				410					415					420	
Leu	Pro	Lys	Arg	Arg	Thr	Gln	Thr	Glu	Thr	Pro	Arg	Pro	Arg	Phe	
				425					430					435	
Ser	Arg	His	Ser	Thr	Ile	Leu	Asp	Tyr	Ile	Asn	Val	Val	Pro	Thr	
				440					445					450	
Ala	Gly	Pro	Leu	Ala	Gln	Lys	Arg	Asn	Gln	Lys	Ala	Thr	Pro	Asn	
				455					460					465	
Ser	Pro	Arg	Thr	Pro	Pro	Pro	Pro	Gly	Ala	Pro	Ser	Pro	Glu	Ser	
				470					475					480	
Lys	Lys	Asn	Gln	Lys	Lys	Gln	Tyr	Gln	Leu	Pro	Ser	Phe	Pro	Glu	
				485					490					495	
Pro	Lys	Ser	Ser	Thr	Gln	Ala	Pro	Glu	Ser	Gln	Glu	Ser	Gln	Glu	
				500					505					510	
Glu	Leu	His	Tyr	Ala	Thr	Leu	Asn	Phe	Pro	Gly	Val	Arg	Pro	Arg	
				515					520					525	
Pro	Glu	Ala	Arg	Met	Pro	Lys	Gly	Thr	Gln	Ala	Asp	Tyr	Ala	Glu	
				530					535					540	
Val	Lys	Phe	Gln												

<210> 260  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 260  
caaagcctgc gcctgggtctg tg 22

<210> 261  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 261  
ttctggagcc cagaggggtgc tgag 24

<210> 262  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 262  
ggagctgcca cccattcaaa tggagcacga aggagagttc acctg 45

<210> 263  
<211> 2857  
<212> DNA  
<213> Homo sapiens

<400> 263  
tgaagagtaa tagttggaat caaaagagtc aacgcaatga actgttattt 50  
actgctgcgt tttatgttgg gaattcctct cctatggcct tgtcttggag 100  
caacagaaaa ctctcaaaca aagaaagtca agcagccagt gcgatctcat 150  
ttgagagtga agcgtggctg ggtgtggaac caattttttg taccagagga 200  
aatgaatacg actagtcatc acatcggcca gctaagatct gatttagaca 250  
atggaaacaa ttctttccag tacaagcttt tgggagctgg agctggaagt 300  
acttttatca ttgatgaaag aacaggtgac atatatgcca tacagaagct 350  
tgatagagag gagcgatccc tctacatctt aagagcccag gtaatagaca 400  
tcgctactgg aagggtgtg gaacctgagt ctgagtttgt catcaaagtt 450

toggatatca atgacaatga accaaaattc ctagatgaac cttatgaggc 500  
 cattgtacca gagatgtctc cagaaggaac attagttatc caggtgacag 550  
 caagtgatgc tgacgatccc tcaagtggta ataatgctcg tctcctctac 600  
 agcttacttc aaggccagcc atatTTTTtct gttgaaccaa caacaggagt 650  
 cataagaata tcttctaaaa tggatagaga actgcaagat gagtattggg 700  
 taatcattca agccaaggac atgattggtc agccaggagc gttgtctgga 750  
 acaacaagtg tattaattaa actttcagat gttaatgaca ataagcctat 800  
 atttaaagaa agtttatacc gcttgactgt ctctgaatct gcacccactg 850  
 ggacttctat aggaacaatc atggcatatg ataatgacat aggagagaat 900  
 gcagaaatgg attacagcat tgaagaggat gattcgcaaa catttgacat 950  
 tattactaat catgaaactc aagaaggaat agttatatta aaaaagaaag 1000  
 tggattttga gcaccagaac cactacggta ttagagcaaa agttaaaaac 1050  
 catcatgttc ctgagcagct catgaagtac cacactgagg cttccaccac 1100  
 tttcattaag atccagggtg aagatgttga tgagcctcct cttttcctcc 1150  
 ttccatatta tgtatttgaa gtttttgaag aaacccaca gggatcattt 1200  
 gtaggcgtgg tgtctgccac agaccagac aataggaaat ctctatcag 1250  
 gtattctatt actaggagca aagtgttcaa tatcaatgat aatggtaaa 1300  
 tcaactacaag taactcactg gatcgtgaaa tcagtgcttg gtacaaccta 1350  
 agtattacag ccacagaaaa atacaatata gaacagatct cttcgatccc 1400  
 actgtatgtg caagttctta acatcaatga tcatgctcct gagttctctc 1450  
 aatactatga gacttatgtt tgtgaaaatg caggctctgg tcaggtaatt 1500  
 cagactatca gtgcagtga tagagatgaa tccatagaag agcaccattt 1550  
 ttactttaat ctatctgtag aagacactaa caattcaagt ttacaatca 1600  
 tagataatca agataacaca gctgtcattt tgactaatag aactggtttt 1650  
 aaccttcaag aagaacctgt cttctacatc tccatcttaa ttgccgacaa 1700  
 tggaatcccg tcaattacaa gtacaaacac ccttaccatc catgtctgtg 1750  
 actgtgggtga cagtgggagc acacagacct gccagtacca ggagcttgtg 1800  
 ctttccatgg gattcaagac agaagttatc attgctattc tcatttgcac 1850  
 tatgatcata tttgggttta ttttttgac tttgggttta aaacaacgga 1900

gaaaacagat tctatttcct gagaaaagtg aagatttcag agagaatata 1950  
 ttccaatatg atgatgaagg ggggtggagaa gaagatacag aggcctttga 2000  
 tatagcagag ctgaggagta gtaccataat gcgggaacgc aagactcgga 2050  
 aaaccacaag cgctgagatc aggagcctat acaggcagtc tttgcaagtt 2100  
 ggccccgaca gtgccatatt caggaaattc attctggaaa agctogaaga 2150  
 agctaatact gatccgtgtg cccctccttt tgattccctc cagacctacg 2200  
 cttttgaggg aacaggggtca ttagctggat ccctgagctc cttagaatca 2250  
 gcagtctctg atcaggatga aagctatgat taccttaatg agttgggacc 2300  
 tcgctttaaa agattagcat gcatgtttgg ttctgcagtg cagtcaaata 2350  
 attagggctt ttaccatca aaatttttaa aagtgctaata gtgtattcga 2400  
 acccaatggg agtcttaaag agttttgtgc cctggctcta tggcggggaa 2450  
 agccctagtc tatggagttt tctgatttcc ctggagtaaa tactccatgg 2500  
 ttatttttaag ctacctacat gctgtcattg aacagagatg tggggagaaa 2550  
 tgtaaacaat cagctcacag gcatcaatac aaccagattt gaagtaaaat 2600  
 aatgtaggaa gatattaaaa gtagatgaga ggacacaaga tgtagtcgat 2650  
 ccttatgcga ttatatcatt atttacttag gaaagagtaa aaataccaaa 2700  
 cgagaaaatt taaaggagca aaaatttgca agtcaaataa aaatgtacaa 2750  
 atcgagataa catttacatt tctatcatat tgacatgaaa attgaaaatg 2800  
 tatagtcaga gaaattttca tgaattattc catgaagtat tgtttccttt 2850  
 atttaaa 2857

<210> 264

<211> 772

<212> PRT

<213> Homo sapiens

<400> 264

Met	Asn	Cys	Tyr	Leu	Leu	Leu	Arg	Phe	Met	Leu	Gly	Ile	Pro	Leu
1				5					10					15
Leu	Trp	Pro	Cys	Leu	Gly	Ala	Thr	Glu	Asn	Ser	Gln	Thr	Lys	Lys
				20					25					30
Val	Lys	Gln	Pro	Val	Arg	Ser	His	Leu	Arg	Val	Lys	Arg	Gly	Trp
				35					40					45
Val	Trp	Asn	Gln	Phe	Phe	Val	Pro	Glu	Glu	Met	Asn	Thr	Thr	Ser
				50					55					60



His	His	Ile	Gly	Gln	Leu	Arg	Ser	Asp	Leu	Asp	Asn	Gly	Asn	Asn		65	70	75
Ser	Phe	Gln	Tyr	Lys	Leu	Leu	Gly	Ala	Gly	Ala	Gly	Ser	Thr	Phe		80	85	90
Ile	Ile	Asp	Glu	Arg	Thr	Gly	Asp	Ile	Tyr	Ala	Ile	Gln	Lys	Leu		95	100	105
Asp	Arg	Glu	Glu	Arg	Ser	Leu	Tyr	Ile	Leu	Arg	Ala	Gln	Val	Ile		110	115	120
Asp	Ile	Ala	Thr	Gly	Arg	Ala	Val	Glu	Pro	Glu	Ser	Glu	Phe	Val		125	130	135
Ile	Lys	Val	Ser	Asp	Ile	Asn	Asp	Asn	Glu	Pro	Lys	Phe	Leu	Asp		140	145	150
Glu	Pro	Tyr	Glu	Ala	Ile	Val	Pro	Glu	Met	Ser	Pro	Glu	Gly	Thr		155	160	165
Leu	Val	Ile	Gln	Val	Thr	Ala	Ser	Asp	Ala	Asp	Asp	Pro	Ser	Ser		170	175	180
Gly	Asn	Asn	Ala	Arg	Leu	Leu	Tyr	Ser	Leu	Leu	Gln	Gly	Gln	Pro		185	190	195
Tyr	Phe	Ser	Val	Glu	Pro	Thr	Thr	Gly	Val	Ile	Arg	Ile	Ser	Ser		200	205	210
Lys	Met	Asp	Arg	Glu	Leu	Gln	Asp	Glu	Tyr	Trp	Val	Ile	Ile	Gln		215	220	225
Ala	Lys	Asp	Met	Ile	Gly	Gln	Pro	Gly	Ala	Leu	Ser	Gly	Thr	Thr		230	235	240
Ser	Val	Leu	Ile	Lys	Leu	Ser	Asp	Val	Asn	Asp	Asn	Lys	Pro	Ile		245	250	255
Phe	Lys	Glu	Ser	Leu	Tyr	Arg	Leu	Thr	Val	Ser	Glu	Ser	Ala	Pro		260	265	270
Thr	Gly	Thr	Ser	Ile	Gly	Thr	Ile	Met	Ala	Tyr	Asp	Asn	Asp	Ile		275	280	285
Gly	Glu	Asn	Ala	Glu	Met	Asp	Tyr	Ser	Ile	Glu	Glu	Asp	Asp	Ser		290	295	300
Gln	Thr	Phe	Asp	Ile	Ile	Thr	Asn	His	Glu	Thr	Gln	Glu	Gly	Ile		305	310	315
Val	Ile	Leu	Lys	Lys	Lys	Val	Asp	Phe	Glu	His	Gln	Asn	His	Tyr		320	325	330
Gly	Ile	Arg	Ala	Lys	Val	Lys	Asn	His	His	Val	Pro	Glu	Gln	Leu		335	340	345
Met	Lys	Tyr	His	Thr	Glu	Ala	Ser	Thr	Thr	Phe	Ile	Lys	Ile	Gln				

350										355					360				
Val	Glu	Asp	Val	Asp	Glu	Pro	Pro	Leu	Phe	Leu	Leu	Pro	Tyr	Tyr					
				365					370					375					
Val	Phe	Glu	Val	Phe	Glu	Glu	Thr	Pro	Gln	Gly	Ser	Phe	Val	Gly					
				380					385					390					
Val	Val	Ser	Ala	Thr	Asp	Pro	Asp	Asn	Arg	Lys	Ser	Pro	Ile	Arg					
				395					400					405					
Tyr	Ser	Ile	Thr	Arg	Ser	Lys	Val	Phe	Asn	Ile	Asn	Asp	Asn	Gly					
				410					415					420					
Thr	Ile	Thr	Thr	Ser	Asn	Ser	Leu	Asp	Arg	Glu	Ile	Ser	Ala	Trp					
				425					430					435					
Tyr	Asn	Leu	Ser	Ile	Thr	Ala	Thr	Glu	Lys	Tyr	Asn	Ile	Glu	Gln					
				440					445					450					
Ile	Ser	Ser	Ile	Pro	Leu	Tyr	Val	Gln	Val	Leu	Asn	Ile	Asn	Asp					
				455					460					465					
His	Ala	Pro	Glu	Phe	Ser	Gln	Tyr	Tyr	Glu	Thr	Tyr	Val	Cys	Glu					
				470					475					480					
Asn	Ala	Gly	Ser	Gly	Gln	Val	Ile	Gln	Thr	Ile	Ser	Ala	Val	Asp					
				485					490					495					
Arg	Asp	Glu	Ser	Ile	Glu	Glu	His	His	Phe	Tyr	Phe	Asn	Leu	Ser					
				500					505					510					
Val	Glu	Asp	Thr	Asn	Asn	Ser	Ser	Phe	Thr	Ile	Ile	Asp	Asn	Gln					
				515					520					525					
Asp	Asn	Thr	Ala	Val	Ile	Leu	Thr	Asn	Arg	Thr	Gly	Phe	Asn	Leu					
				530					535					540					
Gln	Glu	Glu	Pro	Val	Phe	Tyr	Ile	Ser	Ile	Leu	Ile	Ala	Asp	Asn					
				545					550					555					
Gly	Ile	Pro	Ser	Leu	Thr	Ser	Thr	Asn	Thr	Leu	Thr	Ile	His	Val					
				560					565					570					
Cys	Asp	Cys	Gly	Asp	Ser	Gly	Ser	Thr	Gln	Thr	Cys	Gln	Tyr	Gln					
				575					580					585					
Glu	Leu	Val	Leu	Ser	Met	Gly	Phe	Lys	Thr	Glu	Val	Ile	Ile	Ala					
				590					595					600					
Ile	Leu	Ile	Cys	Ile	Met	Ile	Ile	Phe	Gly	Phe	Ile	Phe	Leu	Thr					
				605					610					615					
Leu	Gly	Leu	Lys	Gln	Arg	Arg	Lys	Gln	Ile	Leu	Phe	Pro	Glu	Lys					
				620					625					630					
Ser	Glu	Asp	Phe	Arg	Glu	Asn	Ile	Phe	Gln	Tyr	Asp	Asp	Glu	Gly					
				635					640					645					

Gly	Gly	Glu	Glu	Asp	Thr	Glu	Ala	Phe	Asp	Ile	Ala	Glu	Leu	Arg	650	655	660
Ser	Ser	Thr	Ile	Met	Arg	Glu	Arg	Lys	Thr	Arg	Lys	Thr	Thr	Ser	665	670	675
Ala	Glu	Ile	Arg	Ser	Leu	Tyr	Arg	Gln	Ser	Leu	Gln	Val	Gly	Pro	680	685	690
Asp	Ser	Ala	Ile	Phe	Arg	Lys	Phe	Ile	Leu	Glu	Lys	Leu	Glu	Glu	695	700	705
Ala	Asn	Thr	Asp	Pro	Cys	Ala	Pro	Pro	Phe	Asp	Ser	Leu	Gln	Thr	710	715	720
Tyr	Ala	Phe	Glu	Gly	Thr	Gly	Ser	Leu	Ala	Gly	Ser	Leu	Ser	Ser	725	730	735
Leu	Glu	Ser	Ala	Val	Ser	Asp	Gln	Asp	Glu	Ser	Tyr	Asp	Tyr	Leu	740	745	750
Asn	Glu	Leu	Gly	Pro	Arg	Phe	Lys	Arg	Leu	Ala	Cys	Met	Phe	Gly	755	760	765
Ser	Ala	Val	Gln	Ser	Asn	Asn									770		

<210> 265  
 <211> 349  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 24, 60, 141, 226, 228, 249, 252  
 <223> unknown base

<400> 265  
 atttcaaggc cagccatatt tttntgttga accaacaaca ggagtcataa 50  
 gaatattttt taaaatggat agagaactgc aagatgagta ttgggtaatc 100  
 attcaagcca aggacatgat tggtcagcca ggagcgttgt ntggaacaac 150  
 aagtgtatta attaaacttt cagatgttaa tgacaataag cctatattta 200  
 aagaaagttt ataccgcttg actgtntntg aatctgcacc cactgggant 250  
 tntataggaa caatcatggc atatgataat gacataggag agaatgcaga 300  
 aatggattac agcattgaag aggatgattc gcaaacattt gacattatt 349

<210> 266  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
 <220>

<223> Synthetic oligonucleotide probe

<400> 266

cttgactgtc tctgaatctg caccc 25

<210> 267

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 267

aagtgggtgga agcctccagt gtgg 24

<210> 268

<211> 52

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 268

ccactacggt attagagcaa aagttaaaaa ccatcatggt tcctggagca 50

gc 52

<210> 269

<211> 2747

<212> DNA

<213> Homo sapiens

<400> 269

gcaacctcag cttctagtat ccagactcca ggcgcgcccc gggcgcgagc 50

cccaaccccg acccagagct tctccagcgg cggcgagcagc agcagggctc 100

cccgccttaa cttcctccgc ggggccagc caccttcggg agtccgggtt 150

gccacctgc aaactctccg cttctgcac ctgccacccc tgagccagcg 200

cgggcccccg agcgagtcag ggccaacgcg gggctgcagc tgttgggctt 250

cattctcgcc ttctgggat ggatcggcgc catcgtcagc actgccctgc 300

cccagtggag gatttactcc tatgcggcg acaacatcgt gaccgccag 350

gccatgtacg aggggctgtg gatgtcctgc gtgtcgcaga gcaccgggca 400

gatccagtgc aaagtctttg actccttgct gaatctgagc agcacattgc 450

aagcaacccg tgccttgatg gtggttggca tcctcctggg agtgatagca 500

atctttgtgg ccaccgttgg catgaagtgt atgaagtgct tggaagacga 550

tgagggtcag aagatgagga tggctgtcat tgggggtgcg atatttcttc 600

ttgcaggctct ggctatittta gttgccacag catggtatgg caatagaatc 650  
 gttcaagaat tctatgaccc tatgacccca gtcaatgcca ggtacgaatt 700  
 tggtcaggct ctcttcactg gctgggctgc tgcttctctc tgccttctgg 750  
 gaggtgccct actttgctgt tcctgtcccc gaaaaacaac ctcttaccca 800  
 acaccaaggc cctatccaaa acctgcacct tccagcggga aagactacgt 850  
 gtgacacaga ggcaaaagga gaaaatcatg ttgaaacaaa ccgaaaatgg 900  
 acattgagat actatcatta acattaggac cttagaattt tgggtattgt 950  
 aatctgaagt atggtattac aaaacaaaca aacaaacaaa aaacccatgt 1000  
 gttaaaatac tcagtgcata acatggctta atcttatttt atcttctttc 1050  
 ctcaatatag gaggggaagt ttttccattt gtattactgc ttccattga 1100  
 gtaatcatal tcaaattggg gaaggggtgc tccttaaata tatatagata 1150  
 tgtatatata catgtttttc tattaataat agacagtaaa atactattct 1200  
 cattatgttg atactagcat acttaaaata tctctaaaat aggtaaatgt 1250  
 atttaattcc atattgatga agatgtttat tgggtatatt tctttttcgt 1300  
 ccttatatac atatgtaaca gtcaaatac atttactctt cttcattagc 1350  
 tttgggtgcc tttgccacaa gacctagcct aatttaccaa ggatgaattc 1400  
 tttcaattct tcatgogtgc ccttttcata tacttatttt attttttacc 1450  
 ataactttat agcacttgca tcgttattaa gcccttattt gttttgtgtt 1500  
 tcattggtct ctatctcctg aatctaacac atttcatagc ctacatttta 1550  
 gtttctaaag ccaagaagaa tttattacaa atcagaactt tggaggcaaa 1600  
 tctttctgca tgaccaaagt gataaattcc tgttgacctt cccacacaat 1650  
 cctgtactc tgacccatag cactcttggt tgctttgaaa atatttgtcc 1700  
 aattgagtag ctgcatgctg ttccccaggt tgttgtaaca caactttatt 1750  
 gattgaattt ttaagctact tattcatagt tttatatccc cctaaactac 1800  
 ctttttgttc cccattcctt aattgtattg ttttccaag tgtaattatc 1850  
 atgctgttta tatcttccta ataagggtgtg gtctgtttgt ctgaacaaag 1900  
 tgctagactt tctggagtga taatctggtg acaaatattc tctctgtagc 1950  
 tgtaagcaag tcaacttaac tttctacctc ttttttctat ctgccaaatt 2000  
 gagataatga tacttaacca gttagaagag gtagtgtgaa tattaattag 2050

tttatattac tcttattctt tgaacatgaa ctatgcctat gtagtgtctt 2100  
 tatttgctca gctggctgag aactgaaga agtcactgaa caaacctac 2150  
 acacgtacct tcatgtgatt cactgccttc ctctctctac cagtctatctt 2200  
 ccactgaaca aaacctacac acataccttc atgtggttca gtgccttcct 2250  
 ctctctacca gtctatttcc actgaacaaa acctacgcac ataccttcat 2300  
 gtggctcagt gccttcctct ctctaccagt ctatttccat tctttcagct 2350  
 gtgtctgaca tgtttgtgct ctgttccatt ttaacaactg ctcttacttt 2400  
 tccagtctgt acagaatgct atttcacttg agcaagatga tgtaatggaa 2450  
 aggggtgttg cactggtgtc tggagacctg gatttgagtc ttggtgctat 2500  
 caatcacctg ctgtgtttga gcaaggcatt tggctgctgt aagcttattg 2550  
 ctctcatctgt aagcgggtgt ttgtaattcc tgatcttccc acctcacagt 2600  
 gatgttggtg ggatccagtg agatagaata catgtaagtg tggttttgta 2650  
 atttaaaaag tgctatacta agggaaagaa ttgaggaatt aactgcatac 2700  
 gttttggtgt tgcttttcaa atgtttgaaa ataaaaaaaa tgттааg 2747

<210> 270

<211> 211

<212> PRT

<213> Homo sapiens

<400> 270

Met	Ala	Asn	Ala	Gly	Leu	Gln	Leu	Leu	Gly	Phe	Ile	Leu	Ala	Phe
1				5					10					15
Leu	Gly	Trp	Ile	Gly	Ala	Ile	Val	Ser	Thr	Ala	Leu	Pro	Gln	Trp
				20					25					30
Arg	Ile	Tyr	Ser	Tyr	Ala	Gly	Asp	Asn	Ile	Val	Thr	Ala	Gln	Ala
				35					40					45
Met	Tyr	Glu	Gly	Leu	Trp	Met	Ser	Cys	Val	Ser	Gln	Ser	Thr	Gly
				50					55					60
Gln	Ile	Gln	Cys	Lys	Val	Phe	Asp	Ser	Leu	Leu	Asn	Leu	Ser	Ser
				65					70					75
Thr	Leu	Gln	Ala	Thr	Arg	Ala	Leu	Met	Val	Val	Gly	Ile	Leu	Leu
				80					85					90
Gly	Val	Ile	Ala	Ile	Phe	Val	Ala	Thr	Val	Gly	Met	Lys	Cys	Met
				95					100					105
Lys	Cys	Leu	Glu	Asp	Asp	Glu	Val	Gln	Lys	Met	Arg	Met	Ala	Val
				110					115					120

Ile Gly Gly Ala	Ile Phe Leu Leu Ala	Gly Leu Ala Ile Leu Val
125	130	135
Ala Thr Ala Trp Tyr Gly Asn Arg Ile	Val Gln Glu Phe Tyr Asp	
140	145	150
Pro Met Thr Pro Val Asn Ala Arg Tyr	Glu Phe Gly Gln Ala Leu	
155	160	165
Phe Thr Gly Trp Ala Ala Ala Ser Leu	Cys Leu Leu Gly Gly Ala	
170	175	180
Leu Leu Cys Cys Ser Cys Pro Arg Lys	Thr Thr Ser Tyr Pro Thr	
185	190	195
Pro Arg Pro Tyr Pro Lys Pro Ala Pro	Ser Ser Gly Lys Asp Tyr	
200	205	210

Val

<210> 271  
 <211> 564  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 21, 69, 163, 434, 436, 444  
 <223> unknown base

<400> 271  
 ttctggccaa acccggggct ncagctgttg ggcttcatct cgccttcctg 50  
 ggatggatcg gcgccatcnt cacactgccc ttccccagtg gaggatttta 100  
 ctccctatgc tggcgacaac atcgtgaccg cccagcccat gtacgagggg 150  
 ctgtggatgt ccngcgtgtc gcagagcacc gggcagatcc agtgcaaagt 200  
 ctttgactcc ttgctgaatc tgagcagcac attgcaagca acccgtgcct 250  
 tgatgggtgg ttggcatcctc ctgggagtga tagcaatctt tgtggccacc 300  
 gttggcatga agtgtatgaa gtgcttgaa gacgatgagg tgcagaagat 350  
 gaggatggct gtcattgggg gcgcgatatt tcttcttgca ggtctggcta 400  
 ttttagttgc cacagcatgg tatggcaata gaancnttca acantttctat 450  
 gaccctatga cccagtc aa tgccaggtac gaatttggtc aggtctctctt 500  
 cactggctgg gctgctgctt ctctctgcct tctgggaggt gccctacttt 550  
 gctgttctctg tccc 564

<210> 272  
 <211> 498

<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 30, 49, 102, 141, 147, 171, 324-325, 339-341  
<223> unknown base

<400> 272  
acccttgacc caacgcggcc ccccgaccgn ttcattggcca aacgcgggnc 50  
tccagctggtt gggcttcatt ctccctctcc tgggatggac cggcgcccat 100  
cntcagcact gccctgcccc agtggaggat ttactcctat nccggcnaca 150  
acatcgtgac cgcccaggcc ntgtacgagg ggctgtggat gtcctgcgtg 200  
tcgcagagca ccgggcagat ccagtcaaaa gtctttgact cccttgctga 250  
atctgagcag cacattgcaa gcaacccgtg ccttgatggt ggttggcatc 300  
ctcctgggag tgatagcaat cttnttggcc accgttgttn ntgaagtgtg 350  
tgaagtgtctt ggaagacgat gaggtgcaga agatgaggat ggctgtcatt 400  
gggggcgcga tatttcttct tgcaggtctg gctattttag ttgccacagc 450  
atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccga 498

<210> 273  
<211> 552  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 25, 57, 67, 94-95, 116, 152, 165, 212, 233, 392-394  
<223> unknown base

<400> 273  
gggcccagacc attatccaac cgggntcact gttggctcat ctccctcctg 50  
gatgaanogc gccatentca gactccctgc cccatggaga tttnnccat 100  
gctggcgaca acatentgac cccagccat gtacgagggg ctttgaacgt 150  
cngcgtgtcg cagancaccg ggcagatcca gtgcaaagtc tttgactcct 200  
tgctgaatct gngcagcaca ttgcagcaac ccttgccctg atggtggttg 250  
gcatcctcct gggagtgata gcaatctttg tggccaccgt tggcatgaag 300  
tgtatgaagt gcttgaaga cgatgaggtg cagaagatga ggatggctgt 350  
cattgggggc gcgatatttc ttcttgacgg tctggctatt tnnngttgcc 400  
acagcatggt atggcaatag aatcggtcaa gaattctatg accctatgac 450



cccagtcaat gccaggtagc aatttgggtca ggctctcttc actgggtggg 500  
ctgctgcttc tctctgcctt ctgggaggtg cctactttg ctgttcctgc 550  
ga 552

<210> 274

<211> 526

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 25, 50, 60, 123, 127, 370, 395, 397-398, 402-403, 405-407

<223> unknown base

<400> 274

attctccctt cctggatgga tcgcnccacc gtcacattgc cttccccan 50  
tggaggattn actcctatgc tggcgacaac atcgtgaccc cccaggccat 100  
ttaccgaggg gctttggatg tcntgcntgt cgcagagcac cgggcagatc 150  
ccagtcaaaa gtctttgact ccttgctgaa tctgagcagc acattgcaag 200  
caaccctgtc cttgatgggg ttggcatcct cctgggagtg atagcaacct 250  
ttgtggccac cgttggcatg aagtgtatga agtgcttga agacgatgag 300  
gtgccagaag atgaggatgg ctgtcattgg gggcgcgata tttcttggtg 350  
caggctctggc tatttttagtn gccacagcat ggtatggcaa tagantnntt 400  
cnnngnnntct atgaccctat gaccccagtc aatgccaggt acgaatttgg 450  
tcaggctctc ttcaactggct gggctgctgc ttctctctgc cttctgggag 500  
gtgccctact ttgctgttcc tgtccc 526

<210> 275

<211> 398

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 22, 61, 91, 144, 238-239, 262, 265-266, 271, 274

<223> unknown base

<400> 275

agagcaccgg cagatcccag tncaaagtct ttgacccttg ctgaatctga 50  
gcagcacatt ncaagcaacc ccttgcccttg aaggtgggtg ncatcccccc 100  
tgggagtgaa tagcaatctt tgtggccacc gttggcatga agtntatgaa 150  
gtgcttgga gacgatgagg tgcagaagat gaggatggct gtcattgggg 200

gcgcgatatt tcttcttgca ggtctggcta ttttagtnnc cacagcatgg 250  
 tatggcaata gnatnnttcg nggnttctat gaccctatga cccagtcaa 300  
 tgccaggtag gaatttggtc aggtctctct cactggctgg gctgctgctt 350  
 ctctctgcct tctgggaggt gccctacttt gctgttctctg tccccgaa 398

<210> 276

<211> 495

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 39, 58, 130, 234, 314, 364, 427, 450, 461, 476

<223> unknown base

<400> 276

agcaatgccc tgccccaggt ggaggattaa ttcctatgnt ggggacaaca 50  
 ttgtgacngc ccaggccatg tacggggggc tgtggatgtc ctgctgtctg 100  
 cagagcaccg ggcagatcca gtgcaaagtn tttgactcct tgctgaattt 150  
 gagcagcaca ttgcaagcaa cccgtgcctt gatggtgggt ggcattcttc 200  
 tgggagtgat agcaatcttt gtggccaccg tggnaatgaa gtgtatgaag 250  
 tgcttggaag acgatgaggt gcagaagatg aggatggctg tcattggggg 300  
 cgcgatattt cttnttgtag gtctggctat tttagttgcc acagcatggt 350  
 atggcaatag aatngttcaa gaattttatg accctatgac cccagtcaat 400  
 gccaggtagc aatttggtca ggctttnttc actggctggg ctgctgcttn 450  
 tttctgcctt ntgggaggtg ccctantttg ctgttctctg gaacc 495

<210> 277

<211> 200

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 34, 87, 138, 147, 163, 165-166, 172

<223> unknown base

<400> 277

tcataggggg gcgcgatatt ttttcttgca ggtntgggta ttttagttgc 50  
 cacagcatgg tatggcaata gaatcgttca agaattntat gaccctatga 100  
 cccagtcaa tgccaggtag gaatttggtc aggtctnttt cactggntgg 150  
 gctgctgctt ctntnngcct tntgggaggt gccctacttt gctgttctctg 200

<210> 278  
<211> 542  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 26, 43, 55, 77, 198, 361-362, 391-392, 396  
<223> unknown base

<400> 278  
ttcctgggat ggatccgccc ccattcncac atgccctgcc ccttgagat 50  
ttacncctat gctggcgaac aacatcctga ccgcccaggc catgtacgag 100  
gggctgtgga atgtcctgcg tgtcccagag caccgggcag atccagtgc 150  
aagtctttga ctccttgctg aatctgagca gcacattgca agcaaccntg 200  
ccttgatggt ggttggcatc ctcctgggag tgatagcaat ctttgtggcc 250  
accgttggca tgaagtgta tgaagtgctt ggaagacgat gaggtgcaga 300  
agatgaggat ggctgtcatt gggggcgaga tatttcttct tgcaggtctg 350  
gctatttttag nngccacagc atggtatggc aatcagaccc nntcanaaac 400  
tctatgaccc tatgaccca gtcaatgcca ggtacgaatt tggtcaggct 450  
ctcttcaactg gctgggctgc tgcttctctc tgcttcttg gaggtgccct 500  
actttgctgt tcctgtcccc gaaaaacaac ctcttaccca cg 542

<210> 279  
<211> 548  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 90, 115, 147, 228, 387  
<223> unknown base

<400> 279  
cggggctgca gctgttgggc ttcatctcgc ttcctgggat ggaatcggcg 50  
ccatcgtcag cactgccctg ccccatggag gatttactcn tatgctggcg 100  
acaacatcgt gaccnccag gccatgtacg aggggctgtg gatgtcngcg 150  
tgtcgcagag caccgggcag atccagtgc aagtctttga ctccttgctg 200  
aatctgagca gcacattgca agcaaccntg ccttgatggt ggttggcatc 250  
ctcctgggag tgatagcaat ctttgtggcc accgttggca tgaagtgtat 300  
gaagtgcttg gaagacgatg aggtgcagaa gatgaggatg gctgtcattg 350

ggggcgcgat attttttttt gcaggtctgg ctatttntag ttgccacagc 400  
 atggtatggc aatagaatcg ttcaagaatt ctatgaccct atgaccccag 450  
 tcaatgccag gtaogaattt ggtcaggctc tcttcactgg ctgggctgct 500  
 gcttctctct gccttctggg aggtgcccta ctttgctgtt cctgcgaa 548

<210> 280

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 280

cgagcgagtc atggccaacg c 21

<210> 281

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 281

gtgtcacacg tagtctttcc cgctgg 26

<210> 282

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 282

ctgcagctgt tgggcttcat tctgccttc ctgggatgga tcg 43

<210> 283

<211> 2285

<212> DNA

<213> Homo sapiens

<400> 283

gcgtgccgtc agctgcgcy gcaccgcggc ctgcacctcg cctccgccc 50

ctgcgcctgc accgcgtaga ccgaccccc cctccagcgc gccaccccg 100

tagaggaccc ccgcccgtgc ccgacccgt cccgccttt ttgtaaaact 150

taaagcgggc gcagcattaa cgcttccgc cccggtgacc tctcaggggt 200

ctcccccca aaggtgctcc gccgctaagg aacatggcga aggtggagca 250

ggtcctgagc ctgcagccgc agcacgagct caaattccga ggtcccttca 300

ccgatgttgt caccaccaac ctaaagcttg gcaacccgac agaccgaaat 350  
 gtgtgtttta aggtgaagac tacagcacca cgtaggtact gtgtgaggcc 400  
 caacagcgga atcatcgatg caggggcctc aattaatgta tctgtgatgt 450  
 tacagccttt cgattatgat cccaatgaga aaagtaaaca caagtttatg 500  
 gttcagtcta tgtttgctcc aactgacact tcagatatgg aagcagtatg 550  
 gaaggaggca aaaccggaag accttatgga ttcaaaactt agatgtgtgt 600  
 ttgaattgcc agcagagaat gataaaccac atgatgtaga aataaataaa 650  
 attatatcca caactgcac aaagacagaa acaccaatag tgtctaagtc 700  
 tctgagttct tctttggatg acaccgaagt taagaagggt atggaagaat 750  
 gtaagaggct gcaaggtgaa gttcagaggc tacgggagga gaacaagcag 800  
 ttcaagggaag aagatggact gcggatgagg aagacagtgc agagcaacag 850  
 ccccatattca gcattagccc caactgggaa ggaagaaggc cttagcaccc 900  
 ggctcttggc tctggtggtt ttgttcttta tcgttggtgt aattattggg 950  
 aagattgcct tgtagaggta gcatgcacag gatggtaaat tggattggtg 1000  
 gatccaccat atcatgggat ttaaatttat cataaccatg tgtaaaaaga 1050  
 aattaatgta tgatgacac tcacaggtct tgcctttaa ttaccctcc 1100  
 ctgcacacac atacacagat acacacacac aaatataatg taacgatctt 1150  
 ttagaaagtt aaaaatgtat agtaactgat tgagggggaa aaagaatgat 1200  
 ctttattaat gacaaggga accatgagta atgccacaat ggcatattgt 1250  
 aaatgtcatt ttaaacattg gtaggccttg gtacatgatg ctggattacc 1300  
 tctcttaaaa tgacaccctt cctcgcctgt tgggtgctggc ccttggggag 1350  
 ctggagccca gcatgctggg gagtgcggtc agtccacac agtagtcccc 1400  
 acgtggccca ctcccggccc aggctgcttt ccgtgtcttc agttctgtcc 1450  
 aagccatcag ctcttggga ctgatgaaca gagtcaag cccaaaggaa 1500  
 ttgcactgtg gcagcatcag acgtactcgt cataagtga aggcgtgtgt 1550  
 tgactgattg accagcgct ttggaaataa atggcagtgc tttgttact 1600  
 taaagggacc aagctaaatt tgtattggtt catgtagtga agtcaaactg 1650  
 ttattcagag atgtttaatg catatttaac ttatttaatg tatttcact 1700  
 catgttttct tattgtcaca agagtacagt taatgctgcg tgctgctgaa 1750

ctctgttggg tgaactggta ttgctgctgg agggctgtgg gctcctctgt 1800  
 ctctggagag tctgggtcatg tggaggtggg gtttattggg atgctggaga 1850  
 agagctgccca ggaagtgttt tttctgggtc agtaaataac aactgtcata 1900  
 gggagggaaa ttctcagtag tgacagtcaa ctctaggtta ccttttttaa 1950  
 tgaagagtag tcagtcttct agattgttct tataccacct ctcaaccatt 2000  
 actcacactt ccagcgccca ggtccaagtc tgagcctgac ctccccttgg 2050  
 ggacctagcc tggagtcagg acaaatggat cgggctgcag agggtagaa 2100  
 gcgagggcac cagcagttgt ggggtggggag caagggaaga gagaaactct 2150  
 tcagcgaatc cttctagtag tagttgagag tttgactgtg aattaatttt 2200  
 atgccataaa agaccaaccc agttctgttt gactatgtag catcttgaaa 2250  
 agaaaaatta taataaagcc ccaaaattaa gaaaa 2285

<210> 284

<211> 243

<212> PRT

<213> Homo sapiens

<400> 284

Met	Ala	Lys	Val	Glu	Gln	Val	Leu	Ser	Leu	Glu	Pro	Gln	His	Glu	1	5	10	15
Leu	Lys	Phe	Arg	Gly	Pro	Phe	Thr	Asp	Val	Val	Thr	Thr	Asn	Leu	20	25	30	
Lys	Leu	Gly	Asn	Pro	Thr	Asp	Arg	Asn	Val	Cys	Phe	Lys	Val	Lys	35	40	45	
Thr	Thr	Ala	Pro	Arg	Arg	Tyr	Cys	Val	Arg	Pro	Asn	Ser	Gly	Ile	50	55	60	
Ile	Asp	Ala	Gly	Ala	Ser	Ile	Asn	Val	Ser	Val	Met	Leu	Gln	Pro	65	70	75	
Phe	Asp	Tyr	Asp	Pro	Asn	Glu	Lys	Ser	Lys	His	Lys	Phe	Met	Val	80	85	90	
Gln	Ser	Met	Phe	Ala	Pro	Thr	Asp	Thr	Ser	Asp	Met	Glu	Ala	Val	95	100	105	
Trp	Lys	Glu	Ala	Lys	Pro	Glu	Asp	Leu	Met	Asp	Ser	Lys	Leu	Arg	110	115	120	
Cys	Val	Phe	Glu	Leu	Pro	Ala	Glu	Asn	Asp	Lys	Pro	His	Asp	Val	125	130	135	
Glu	Ile	Asn	Lys	Ile	Ile	Ser	Thr	Thr	Ala	Ser	Lys	Thr	Glu	Thr	140	145	150	

Pro	Ile	Val	Ser	Lys	Ser	Leu	Ser	Ser	Ser	Leu	Asp	Asp	Thr	Glu	
				155					160					165	
Val	Lys	Lys	Val	Met	Glu	Glu	Cys	Lys	Arg	Leu	Gln	Gly	Glu	Val	
				170					175					180	
Gln	Arg	Leu	Arg	Glu	Glu	Asn	Lys	Gln	Phe	Lys	Glu	Glu	Asp	Gly	
				185					190					195	
Leu	Arg	Met	Arg	Lys	Thr	Val	Gln	Ser	Asn	Ser	Pro	Ile	Ser	Ala	
				200					205					210	
Leu	Ala	Pro	Thr	Gly	Lys	Glu	Glu	Gly	Leu	Ser	Thr	Arg	Leu	Leu	
				215					220					225	
Ala	Leu	Val	Val	Leu	Phe	Phe	Ile	Val	Gly	Val	Ile	Ile	Gly	Lys	
				230					235					240	

Ile Ala Leu

<210> 285  
 <211> 418  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 40, 53, 68, 119, 134, 177-178, 255  
 <223> unknown base

<400> 285  
 gtcagtcttc tagattgtcc ttatcccacc tttcaaccan tactcacatt 50  
 tcnagcgccc aggtccangt ctgagcctga cttccccttg gggacctagc 100  
 ctggagtcag gacaatggnt cgggctgcag aggnntagaa gcgagggcac 150  
 cagcagtttt ggggtggggag caagggngga gagaaactct tcagcgaatc 200  
 cttctagtag tagttgagag ttgactgtg aattaatttt atgccataaa 250  
 agacnaaccc agttctgttt gactatgtag catcttgaaa agaaaaatta 300  
 taataaagcc ccaaaattaa gaattctttt gtcattttgt cacatttgct 350  
 ctatgggggg aattattatt ttatcatttt tattattttg ccattggaag 400  
 gttaacttta aaatgagc 418

<210> 286  
 <211> 543  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 73, 97

<223> unknown base

<400> 286

tattgtaaag gccatttttaa accattggta ggccttggtg catgatgctg 50  
gattacctcc ttaaattgaca ccenttctcg cctgttggtg ctggccnttg 100  
gggagctgga gccccagcat gctggggagt gcggtcagct ccacacagta 150  
gtccccacgt ggcccactcc cggcccaggc tgctttccgt gtcttcagtt 200  
ctgtccaagc catcagctcc ttgggactga tgaacagagt cagaagccca 250  
aaggaattgc cactgtggca gcatcagacg tactcgatcat aagtgaagagg 300  
cgtgtgttga ctgattgacc cagcgctttg gaaataaatg gcagtgcctt 350  
gttcacttaa agggaccaag ctaaattgta ttggttcatt tagtgaagtc 400  
aaactgttat tcagagatgt ttaatgcata ttttaacttat ttaatgtatt 450  
tcattctcatg ttttcttatt gtcacaagag tacagttaat gctgcgtgct 500  
gctgaactct gttgggtgaa ctggtattgc tgctggaggg ctg 543

<210> 287

<211> 270

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 38, 64, 72, 164, 198, 200, 220, 222, 229, 242

<223> unknown base

<400> 287

ccctggtggt tttgttcttt aattcgttgg tgtaattntt gggaagattg 50  
ctttagagagg tagnatgcac cnggctggta aattggattg gtggatccac 100  
catatccatg ggattttaaat ttatcataac catgtgtaaa aagaaattaa 150  
tgtatgatga catntcacag gtattgcctt taaattaccc atccctgnan 200  
acacatacac agatacacan anacaaatnt aatgtaacga tnttttagaa 250  
agttaaaaaat gtatagtaac 270

<210> 288

<211> 428

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 35, 116, 129, 197, 278, 294, 297, 349, 351

<223> unknown base



<400> 288

ggtggcccat tcccggccca ggctgctttc cggtnntcag ttctgtccaa 50  
gccatcagct ccttgggact gatgaacaga gtcagaagcc caaaggaatt 100  
gcactgtggc agcatnagac gtacttgtna taagtgagag gcgtgtgttg 150  
actgattgac ccagcgcttt ggaaataaat ggcaagtgtt tgttcantta 200  
aagggaccaa gctaaatttg tattggttca tgtagtgaag tcaaactgtt 250  
attcagagat gtttaatgca tatttaantt atttaatgta tttnatntca 300  
tgttttctta ttgtcacaag agtacagtta atgctgcgtg ctgctgaant 350  
ntgttgggtg aactggtatt gctgctggag ggctgtgggc tcctctgtct 400  
ttggagagtc tggatcatgtg gaggtggg 428

<210> 289

<211> 320

<212> DNA

<213> Homo sapiens

<400> 289

tgctttccgt gtcttcagtt ctgtccaagc catcagctcc ttgggacttg 50  
atgaacagag tcagaagccc aaaggaattg cactgtggca gcatcagacg 100  
tactcgtcat aagtgaagag cgtgtgttga ctgattgacc cagcgctttg 150  
gaaataaatg gcagtgtttt gttcacttaa agggaccaag ctaaatttgt 200  
attggttcat gtagtgaagt caaactgtta ttcagagatg tttaatgcat 250  
atttaactta tttaatgtat ttcattctcat gttttcttat tgtcacaaga 300  
gtacagttaa tgctgcgtgc 320

<210> 290

<211> 609

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 57, 60, 186, 235, 244, 304, 339, 355, 359, 361, 387, 432, 441,  
447, 481, 513, 532, 584, 598

<223> unknown base

<400> 290

aaacctttaa aagttgaggg gaaaagaatg atcctttatt aatgacaagg 50  
gaaacctgn gtaatgccac aatggcatat tgtaaatgtc attttaaaca 100  
ttggtaggcc ttggtacatg atgctggatt acctctctta aatgacacc 150  
cttcctcgcc tgttggtgct ggcccttggg gagctngagc ccagcatgct 200

ggggagtgcg gtctgctcca cacagtagtc cccangtggc ccantcccgg 250  
 cccaggctgc tttccgtgtc ttcagttctg tccaagccat cagctccttg 300  
 ggantgatga acagagtcag aagcccaaag gaattgcant gtggcagcat 350  
 cagangtant ngtcataagt gagaggcgtg tgttgantga ttgaccagc 400  
 gctttggaaa taaatggcag tgctttgttc anttaaaggg nccaagntaa 450  
 atttgtattg gttcatgtag tgaagtcaaa ntgttattca gagatgttta 500  
 atgcatattt aanttattta atgtatttca tntcatgttt tcttattgtc 550  
 acaagggtac agttaatgct gcgtgctgct gaantctgtt gggagaantg 600  
 gtattgctg 609

<210> 291

<211> 493

<212> DNA

<213> Homo sapiens

<400> 291

ggcccttgagg gagctggagc ccagcatgct ggggagtgcg gtcagctcca 50  
 cacagtagtc cccacgtggc ccaactcccgg cccaggctgc tttccgtgtc 100  
 ttcagttctg tccaagccat cagctccttg ggactgatga acagagtcag 150  
 aagcccaaag gaattgcact gtggcagcat cagacgtact cgtcataagt 200  
 gagaggcgtg tgttgactga ttgaccagc gctttggaaa taaatggcag 250  
 tgctttgttc acttaaaggg accaagctaa atttgtattg gttcatgtag 300  
 tgaagtcaaa ctgttattca gagatgttta atgcatattt aacttattta 350  
 atgtatttca tctcatgttt tcttattgtc acaagagtac agttaatgct 400  
 gcgtgctgct gaactctgtt gggagaactg gtattgctgc tggagggctg 450  
 tgggctcctc tgtctctgga gactctggc atgtggaggt ggg 493

<210> 292

<211> 27

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 292

gcaccaccgt aggtacttgt gtgaggc 27

<210> 293

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 293

aaccaccaga gccaaagagcc ggg 23

<210> 294

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 294

cagcggaaatc atcgatgcag gggcctcaat taatgtatct gtgatgttac 50

<210> 295

<211> 2530

<212> DNA

<213> Homo sapiens

<400> 295

gcgagctccg ggtgctgtgg cccggccttg gcggggcggc ctccggctca 50  
ggctggctga gaggtccca gctgcagcgt ccccgccgc ctctcgga 100  
gtctgatct cagctgacag tgccctcggg gaccaaaca gcctggcagg 150  
gtctcacttt gttgccagg ctggagttca gtgccatgat catggtttac 200  
tgcagccttg acctcctggg ttcaagcga cctgctgagt agctgggact 250  
acaggacaaa attagaagat caaaatggaa aatatgctgc tttggttgat 300  
atTTTTcacc cctgggtgga ccctcattga tggatctgaa atggaatggg 350  
atTTTTatgtg gcacttgaga aaggtacccc ggattgtcag tgaaaggact 400  
ttccatctca ccagccccgc atttgaggca gatgctaaga tgatggtaaa 450  
tacagtgtgt ggcacgaat gccagaaaga actcccaact ccagccttt 500  
ctgaattgga ggattatctt tcctatgaga ctgtctttga gaatggcacc 550  
cgaaccttaa ccagggtgaa agttcaagat ttggttcttg agccgactca 600  
aaatatcacc acaaaggag tatctgttag gagaaagaga cagggtgatg 650  
gcaccgacag caggttcagc atcttgaca aaaggttctt aaccaatttc 700  
cctttcagca cagctgtgaa gctttccacg ggctgtagtg gcattctcat 750  
ttccctcag catgttctaa ctgctgccca ctgtgttcat gatggaaagg 800  
actatgtcaa agggagtaaa aagctaagg tagggttgtt gaagatgagg 850

aataaaagtg gaggcaagaa acgtcgaggt tctaagagga gcaggagaga 900  
agctagtggg ggtgaccaa gagagggtac cagagagcat ctgcaggaga 950  
gagcgaaggg tgggagaaga agaaaaaaat ctggccgggg tcagaggatt 1000  
gccgaagggg ggccttcctt tcagtggacc cgggtcaaga atacccacat 1050  
tccgaagggc tgggcacgag gaggcattgg ggacgctacc ttggactatg 1100  
actatgctct tctggagctg aagcgtgctc aaaaaaagaa atacatggaa 1150  
cttggaatca gcccaacgat caagaaaatg cctgggtggaa tgatccactt 1200  
ctcaggattt gataacgata gggctgatca gttggtctat cggttttgca 1250  
gtgtgtccga cgaatccaat gatctccttt accaatactg cgatgctgag 1300  
tcgggctcca cgggttcggg ggtctatctg cgtctgaaag atccagacaa 1350  
aaagaattgg aagcgcaaaa tcattgcggt ctactcaggg caccagtggg 1400  
tggatgtcca cgggggttcag aaggactaca acgttgctgt tcgcatcact 1450  
cccctaaaat acgcccagat ttgcctctgg attcacggga acgatgccaa 1500  
ttgtgcttac ggctaacaga gacctgaaac agggcgggtg atcatctaaa 1550  
tcacagagaa aaccagctct gcttacgta gtgagatcac ttcataggtt 1600  
atgcctggac ttgaactctg tcaatagcat ttcaacattt ttcaaaaatca 1650  
ggagattttc gtccatttaa aaaatgtata ggtgcagata ttgaaactag 1700  
gtgggcactt caatgccaa tatatactct tctttacatg gtgatgagtt 1750  
tcattttagt aaaaattttg ttgccttctt aaaaattaga cacacttta 1800  
accttcaaac aggtattata aataacatgt gactccttaa tggacttatt 1850  
ctcagggtcc tactctaaga agaactaat aggatgctgg ttgtgtatta 1900  
aatgtgaaat tgcatagata aaggtagatg gtaaagcaat tagtatcaga 1950  
atagagacag aaagttacaa cacagtttgt actactctga gatggatcca 2000  
ttcagotcat gccctcaatg tttatattgt gttatctgtt gggctctggga 2050  
catttagttt agtttttttg aagaattaca aatcagaaga aaaagcaagc 2100  
attataaaca aaactaataa ctgttttact gctttaagaa ataacaatta 2150  
caatgtgtat tatttaaaaa tgggagaaat agtttgttct atgaaataaa 2200  
cctagtttag aaatagggaa gctgagacat tttagatct caagttttta 2250  
tttaactaat actcaaaata tggacttttc atgtatgcat agggaagaca 2300

cttcacaaat tatgaatgat catgtgttga aagccacatt attttatgct 2350  
 atacattcta tgtatgaggt gctacatttt taggacaaaag aattctgtaa 2400  
 tctttttcaa gaaagagtct ttttctcctt gacaaaatcc agcttttgta 2450  
 tgaggactat agggatgaatt ctctgattag taattttaga tatgtccttt 2500  
 cctaaaaatg aataaaattt atgaatatga 2530

<210> 296

<211> 413

<212> PRT

<213> Homo sapiens

<400> 296

Met	Glu	Asn	Met	Leu	Leu	Trp	Leu	Ile	Phe	Phe	Thr	Pro	Gly	Trp	
1				5					10					15	
Thr	Leu	Ile	Asp	Gly	Ser	Glu	Met	Glu	Trp	Asp	Phe	Met	Trp	His	
			20						25					30	
Leu	Arg	Lys	Val	Pro	Arg	Ile	Val	Ser	Glu	Arg	Thr	Phe	His	Leu	
			35						40					45	
Thr	Ser	Pro	Ala	Phe	Glu	Ala	Asp	Ala	Lys	Met	Met	Val	Asn	Thr	
			50						55					60	
Val	Cys	Gly	Ile	Glu	Cys	Gln	Lys	Glu	Leu	Pro	Thr	Pro	Ser	Leu	
			65						70					75	
Ser	Glu	Leu	Glu	Asp	Tyr	Leu	Ser	Tyr	Glu	Thr	Val	Phe	Glu	Asn	
			80						85					90	
Gly	Thr	Arg	Thr	Leu	Thr	Arg	Val	Lys	Val	Gln	Asp	Leu	Val	Leu	
			95						100					105	
Glu	Pro	Thr	Gln	Asn	Ile	Thr	Thr	Lys	Gly	Val	Ser	Val	Arg	Arg	
			110						115					120	
Lys	Arg	Gln	Val	Tyr	Gly	Thr	Asp	Ser	Arg	Phe	Ser	Ile	Leu	Asp	
			125						130					135	
Lys	Arg	Phe	Leu	Thr	Asn	Phe	Pro	Phe	Ser	Thr	Ala	Val	Lys	Leu	
			140						145					150	
Ser	Thr	Gly	Cys	Ser	Gly	Ile	Leu	Ile	Ser	Pro	Gln	His	Val	Leu	
			155						160					165	
Thr	Ala	Ala	His	Cys	Val	His	Asp	Gly	Lys	Asp	Tyr	Val	Lys	Gly	
			170						175					180	
Ser	Lys	Lys	Leu	Arg	Val	Gly	Leu	Leu	Lys	Met	Arg	Asn	Lys	Ser	
			185						190					195	
Gly	Gly	Lys	Lys	Arg	Arg	Gly	Ser	Lys	Arg	Ser	Arg	Arg	Glu	Ala	
			200						205					210	

Ser Gly Gly Asp	Gln Arg Glu Gly Thr	Arg Glu His Leu Gln Glu	215	220	225
Arg Ala Lys Gly	Gly Arg Arg Arg Lys	Lys Ser Gly Arg Gly Gln	230	235	240
Arg Ile Ala Glu	Gly Arg Pro Ser Phe	Gln Trp Thr Arg Val Lys	245	250	255
Asn Thr His Ile	Pro Lys Gly Trp Ala	Arg Gly Gly Met Gly Asp	260	265	270
Ala Thr Leu Asp	Tyr Asp Tyr Ala Leu	Leu Glu Leu Lys Arg Ala	275	280	285
His Lys Lys Lys	Tyr Met Glu Leu Gly	Ile Ser Pro Thr Ile Lys	290	295	300
Lys Met Pro Gly	Gly Met Ile His Phe	Ser Gly Phe Asp Asn Asp	305	310	315
Arg Ala Asp Gln	Leu Val Tyr Arg Phe	Cys Ser Val Ser Asp Glu	320	325	330
Ser Asn Asp Leu	Leu Tyr Gln Tyr Cys	Asp Ala Glu Ser Gly Ser	335	340	345
Thr Gly Ser Gly	Val Tyr Leu Arg Leu	Lys Asp Pro Asp Lys Lys	350	355	360
Asn Trp Lys Arg	Lys Ile Ile Ala Val	Tyr Ser Gly His Gln Trp	365	370	375
Val Asp Val His	Gly Val Gln Lys Asp	Tyr Asn Val Ala Val Arg	380	385	390
Ile Thr Pro Leu	Lys Tyr Ala Gln Ile	Cys Leu Trp Ile His Gly	395	400	405
Asn Asp Ala Asn	Cys Ala Tyr Gly		410		

<210> 297

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 297

gcatctgcag gagagagcga aggg 24

<210> 298

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 298  
catcggttccc gtgaatccag aggc 24

<210> 299  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 299  
gaagggaggc cttcctttca gtggacccgg gtcaagaata cccac 45

<210> 300  
<211> 1869  
<212> DNA  
<213> Homo sapiens

<400> 300  
aatgtgagag gggctgatgg aagctgatag gcaggactgg agtgtttagca 50  
ccagtactgg atgtgacagc aggcagagga gcacttagca gcttattcag 100  
tgtccgattc tgattccggc aaggatccaa gcatggaatg ctgccgtcgg 150  
gcaactcctg gcacactgct cctctttctg gctttcctgc tcctgagttc 200  
caggaccgca cgctccgagg aggaccggga cggcctatgg gatgcctggg 250  
gcccattggag tgaatgctca cgcacctgcg ggggaggggc ctcctactct 300  
ctgaggcgct gcctgagcag caagagctgt gaaggaagaa atatccgata 350  
cagaacatgc agtaatgtgg actgccacc agaagcagggt gatttccgag 400  
ctcagcaatg ctcagctcat aatgatgtca agcaccatgg ccagttttat 450  
gaatggcttc ctgtgtctaa tgaccctgac aacccatgtt cactcaagtg 500  
ccaagccaaa ggaacaacc tggttggtga actagcacct aaggctcttag 550  
atggtacgag ttgctataca gaatctttgg atatgtgcat cagtggttta 600  
tgccaaattg ttggctgcga tcaccagctg ggaagcaccg tcaaggaaga 650  
taactgtggg gtctgcaacg gagatgggtc cacctgccgg ctggtccgag 700  
ggcagtataa atcccagctc tccgcaacca aatcgatga tactgtgggt 750  
gcacttccct atggaagtag acatattcgc cttgtcttaa aaggctcctga 800  
tcacttatat ctggaaacca aaaccctcca ggggactaaa ggtgaaaaca 850  
gtctcagctc cacaggaact ttccttggtg acaattctag tgtggacttc 900

cagaaatttc cagacaaaga gatactgaga atggctggac cactcacagc 950  
agatttcatt gtcaagattc gtaactcggg ctccgctgac agtacagtcc 1000  
agttcatctt ctatcaaccc atcatccacc gatggaggga gacggatttc 1050  
tttccttgct cagcaacctg tggaggaggt tatcagctga catcggctga 1100  
gtgctacgat ctgaggagca accgtgtggt tgctgaccaa tactgtcact 1150  
attaccaga gaacatcaaa cccaaaccca agcttcagga gtgcaacttg 1200  
gatccttgct cagccagtga cggatacaag cagatcatgc cttatgacct 1250  
ctaccatccc cttoctoggt gggaggccac cccatggacc gcgtgctcct 1300  
cctcgtgtgg ggggggcac cagagccggg cagtttcctg tgtggaggag 1350  
gacatccagg ggcattgtac ttcagtggaa gagtggaat gcatgtacac 1400  
ccctaagatg cccatcgcgc agccctgcaa ctttttgac tgccctaaat 1450  
ggctggcaca ggagtgggtt ccgtgcacag tgacatgtgg ccagggcctc 1500  
agataccgtg tggctcctct catcgaccat cgaggaatgc acacaggagg 1550  
ctgtagccca aaaacaaagc cccacataaa agaggaatgc atcgtacca 1600  
ctccctgcta taaacccaaa gagaaacttc cagtcgaggc caagttgcca 1650  
tggttcaaac aagctcaaga gctagaagaa ggagctgctg tgtcagagga 1700  
gccctogtaa gttgtaaaag cacagactgt tctatatttg aaactgtttt 1750  
gtttaaagaa agcagtgtct cactggttgt agctttcatg gtttctgaac 1800  
taagtgtaat catctacca aagctttttg gctctcaaat taaagattga 1850  
ttagtttcaa aaaaaaaaa 1869

<210> 301

<211> 525

<212> PRT

<213> Homo sapiens

<400> 301

Met	Glu	Cys	Cys	Arg	Arg	Ala	Thr	Pro	Gly	Thr	Leu	Leu	Leu	Phe
1				5					10					15
Leu	Ala	Phe	Leu	Leu	Leu	Ser	Ser	Arg	Thr	Ala	Arg	Ser	Glu	Glu
			20						25					30
Asp	Arg	Asp	Gly	Leu	Trp	Asp	Ala	Trp	Gly	Pro	Trp	Ser	Glu	Cys
			35						40					45
Ser	Arg	Thr	Cys	Gly	Gly	Gly	Ala	Ser	Tyr	Ser	Leu	Arg	Arg	Cys
			50						55					60



Leu	Ser	Ser	Lys	Ser	Cys	Glu	Gly	Arg	Asn	Ile	Arg	Tyr	Arg	Thr	
				65					70					75	
Cys	Ser	Asn	Val	Asp	Cys	Pro	Pro	Glu	Ala	Gly	Asp	Phe	Arg	Ala	
				80					85					90	
Gln	Gln	Cys	Ser	Ala	His	Asn	Asp	Val	Lys	His	His	Gly	Gln	Phe	
				95					100					105	
Tyr	Glu	Trp	Leu	Pro	Val	Ser	Asn	Asp	Pro	Asp	Asn	Pro	Cys	Ser	
				110					115					120	
Leu	Lys	Cys	Gln	Ala	Lys	Gly	Thr	Thr	Leu	Val	Val	Glu	Leu	Ala	
				125					130					135	
Pro	Lys	Val	Leu	Asp	Gly	Thr	Arg	Cys	Tyr	Thr	Glu	Ser	Leu	Asp	
				140					145					150	
Met	Cys	Ile	Ser	Gly	Leu	Cys	Gln	Ile	Val	Gly	Cys	Asp	His	Gln	
				155					160					165	
Leu	Gly	Ser	Thr	Val	Lys	Glu	Asp	Asn	Cys	Gly	Val	Cys	Asn	Gly	
				170					175					180	
Asp	Gly	Ser	Thr	Cys	Arg	Leu	Val	Arg	Gly	Gln	Tyr	Lys	Ser	Gln	
				185					190					195	
Leu	Ser	Ala	Thr	Lys	Ser	Asp	Asp	Thr	Val	Val	Ala	Leu	Pro	Tyr	
				200					205					210	
Gly	Ser	Arg	His	Ile	Arg	Leu	Val	Leu	Lys	Gly	Pro	Asp	His	Leu	
				215					220					225	
Tyr	Leu	Glu	Thr	Lys	Thr	Leu	Gln	Gly	Thr	Lys	Gly	Glu	Asn	Ser	
				230					235					240	
Leu	Ser	Ser	Thr	Gly	Thr	Phe	Leu	Val	Asp	Asn	Ser	Ser	Val	Asp	
				245					250					255	
Phe	Gln	Lys	Phe	Pro	Asp	Lys	Glu	Ile	Leu	Arg	Met	Ala	Gly	Pro	
				260					265					270	
Leu	Thr	Ala	Asp	Phe	Ile	Val	Lys	Ile	Arg	Asn	Ser	Gly	Ser	Ala	
				275					280					285	
Asp	Ser	Thr	Val	Gln	Phe	Ile	Phe	Tyr	Gln	Pro	Ile	Ile	His	Arg	
				290					295					300	
Trp	Arg	Glu	Thr	Asp	Phe	Phe	Pro	Cys	Ser	Ala	Thr	Cys	Gly	Gly	
				305					310					315	
Gly	Tyr	Gln	Leu	Thr	Ser	Ala	Glu	Cys	Tyr	Asp	Leu	Arg	Ser	Asn	
				320					325					330	
Arg	Val	Val	Ala	Asp	Gln	Tyr	Cys	His	Tyr	Tyr	Pro	Glu	Asn	Ile	
				335					340					345	
Lys	Pro	Lys	Pro	Lys	Leu	Gln	Glu	Cys	Asn	Leu	Asp	Pro	Cys	Pro	

350	355	360
Ala Ser Asp Gly Tyr Lys Gln Ile Met	Pro Tyr Asp Leu Tyr His	
365	370	375
Pro Leu Pro Arg Trp Glu Ala Thr Pro	Trp Thr Ala Cys Ser Ser	
380	385	390
Ser Cys Gly Gly Gly Ile Gln Ser Arg	Ala Val Ser Cys Val Glu	
395	400	405
Glu Asp Ile Gln Gly His Val Thr Ser	Val Glu Glu Trp Lys Cys	
410	415	420
Met Tyr Thr Pro Lys Met Pro Ile Ala	Gln Pro Cys Asn Ile Phe	
425	430	435
Asp Cys Pro Lys Trp Leu Ala Gln Glu	Trp Ser Pro Cys Thr Val	
440	445	450
Thr Cys Gly Gln Gly Leu Arg Tyr Arg	Val Val Leu Cys Ile Asp	
455	460	465
His Arg Gly Met His Thr Gly Gly Cys	Ser Pro Lys Thr Lys Pro	
470	475	480
His Ile Lys Glu Glu Cys Ile Val Pro	Thr Pro Cys Tyr Lys Pro	
485	490	495
Lys Glu Lys Leu Pro Val Glu Ala Lys	Leu Pro Trp Phe Lys Gln	
500	505	510
Ala Gln Glu Leu Glu Glu Gly Ala Ala	Val Ser Glu Glu Pro Ser	
515	520	525

<210> 302  
 <211> 1533  
 <212> DNA  
 <213> Homo sapiens

<400> 302  
 cggacgcgtg ggcggcggct gcggaactcc cgtggagggg ccggtgggccc 50  
 ctcgggcctg acagatggca gtggccactg cggcggcagt actggccgct 100  
 ctgggcgggg cgctgtggct ggcggcccgc cggttcgtgg ggcccagggt 150  
 ccagcggctg cgcagaggcg gggaccccg cctcatgcac gggaagactg 200  
 tgctgatcac cggggcgaac agcggcctgg gccgcgccac ggccgcccag 250  
 ctactgcgcc tgggagcgcg ggtgatcatg ggctgccggg accgcgcgcg 300  
 cgccgaggag gcggcgggtc agctccgccg cgagctccgc caggccgcgg 350  
 agtgcgggcc agagcctggc gtcagcgggg tgggcgagct catagtccgg 400  
 gagctggacc tcgcctcgct gcgctcgggt gcgccttct gccaggaaat 450

gctccaggaa gagcctagggc tggatgtctt gatcaataac gcagggatct 500  
tccagtgtccc ttacatgaag actgaagatg ggtttgagat gcagttcgga 550  
gtgaaccatc tggggcactt tctactcacc aatcttctcc ttggactcct 600  
caaaagtcca gctcccagca ggattgtggg agtttcttcc aaactttata 650  
aatacggaga catcaatttt gatgacttga acagtgaaca aagctataat 700  
aaaagctttt gttatagccg gagcaaaactg gctaacattc tttttaccag 750  
ggaactagcc cgccgcttag aaggcacaaa tgtcaccgtc aatgtgttgc 800  
atcctggtat tgtacggaca aatctgggga ggcacataca cattccactg 850  
ttggtcaaac cactcttcaa tttggtgtca tgggcttttt tcaaaaactcc 900  
agtagaaggt gccagactt ccattttattt ggcctcttca cctgaggtag 950  
aaggagtgtc aggaagatac tttggggatt gtaaagagga agaactgttg 1000  
cccaaagcta tggatgaatc tgttgcaaga aaactctggg atatcagtga 1050  
agtgatgggt ggccgtgctaa aataggaaca aggagtaaaa gagctgttta 1100  
taaaactgca tatcagttat atctgtgatc aggaatgggtg tggattgaga 1150  
acttggtact tgaagaaaaa gaattttgat attggaatag cctgctaaga 1200  
ggtacatgtg ggtatttttg agttactgaa aaattatttt tgggataaga 1250  
gaatttcagc aaagatgttt taaatatata tagtaagtat aatgaataat 1300  
aagtacaatg aaaaatacaa ttatattgta aaattataac tgggcaagca 1350  
tggatgacat attaataattt gtcagaatta agtgactcaa agtgctatcg 1400  
agaggttttt caagtatctt tgagtttcat ggccaaagtg ttaactagtt 1450  
ttactacaat gtttgggtgtt tgtgtggaaa ttatctgcct ggtgtgtgca 1500  
cacaagtctt acttgaata aatttactgg tac 1533

<210> 303

<211> 336

<212> PRT

<213> Homo sapiens

<400> 303

Met	Ala	Val	Ala	Thr	Ala	Ala	Ala	Val	Leu	Ala	Ala	Leu	Gly	Gly
1				5				10					15	
Ala	Leu	Trp	Leu	Ala	Ala	Arg	Arg	Phe	Val	Gly	Pro	Arg	Val	Gln
			20					25					30	
Arg	Leu	Arg	Arg	Gly	Gly	Asp	Pro	Gly	Leu	Met	His	Gly	Lys	Thr
				35				40					45	



<210> 304  
 <211> 521  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 20, 34, 62, 87, 221, 229  
 <223> unknown base

<400> 304  
 ggggattgta aagaggaagn actgtgccca aagntatgga tgaatctgtt 50  
 gcaagaaaat tntgggatat cagtgaagtg atggttngcc tgctaaaata 100  
 ggaacaagga gtaaaagagc tgtttataaa actgcatatc agttatatct 150  
 gtgatcagga atggtgtgga ttgagaactt gttacttgaa gaaaaagaat 200  
 tttgatattg gaatagcctg ntaagaggna catgtgggta ttttgagatt 250  
 actgaaaaat tttttttggg ataagagaat ttcagcaaag atgttttaaa 300  
 tatatatagt aagtataatg aataataagt acaatgaaaa atacaattat 350  
 attgtaaaat tataactggg caagcatgga tgacatatta atatttgtca 400  
 gaattaagtg actcaaagtg ctatcgagag gtttttcaag tatctttgag 450  
 tttcatggcc aaagtgttaa ctagttttac tacaatgttt ggtgtttgtg 500  
 tggaaattat ctgcctggct t 521

<210> 305  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 305  
 ccaggaaatg ctccaggaag agcc 24

<210> 306  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 306  
 gcccatgaca ccaaattgaa gagtgg 26

<210> 307

<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 307  
aacgcaggga tcttccagtg cccttacatg aagactgaag atggg 45

<210> 308  
<211> 1523  
<212> DNA  
<213> Homo sapiens

<400> 308  
gagaggacga ggtgccgctg cctggagaat cctccgctgc cgtcggctcc 50  
cggagcccag ccccttccta acccaaccca acctagcca gtcccagccg 100  
ccagcgcctg tccctgtcac ggacccacgc gttaccatgc atcctgccgt 150  
cttctatccc ttaccgcacc tcagatgctc ccttctgctc ctggtaactt 200  
gggtttttac tcctgtaaca actgaaataa caagtcttgc tacagagaat 250  
atagatgaaa ttttaaacaa tgctgatgtt gctttagtaa atttttatgc 300  
tgactggtgt cgtttcagtc agatgttgca tccaattttt gaggaagctt 350  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 400  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 450  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 500  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggcaa 550  
caaaaaagtg accccattca agaaattcgg gacttagcag aaatcaccac 600  
tcttgatcgc agcaaaagaa atatcattgg atattttgag caaaaggact 650  
cggacaacta tagagttttt gaacgagtag cgaatatttt gcatgatgac 700  
tgtgcctttc tttctgcatt tggggatgtt tcaaaaccgg aaagatatag 750  
tggcgacaac ataattctaca aaccaccagg gcattctgct ccggatatgg 800  
tgtacttggg agctatgaca aattttgatg tgacttaca ttggattcaa 850  
gataaatgtg ttcctcttgt ccgagaaata acatttgaaa atggagagga 900  
attgacagaa gaaggactgc cttttctcat actctttcac atgaaagaag 950  
atacagaaag tttagaaata ttccagaatg aagtagctcg gcaattaata 1000  
agtgaaaaag gtacaataaa ctttttacat gccgattgtg acaaatttag 1050

acatcctctt ctgcacatac agaaaactcc agcagattgt cctgtaatcg 1100  
 ctattgacag ctttaggcat atgtatgtgt ttggagactt caaagatgta 1150  
 ttaattcctg gaaaactcaa gcaattcgta tttgacttac attctggaaa 1200  
 actgcacaga gaattccatc atggacctga cccaactgat acagccccag 1250  
 gagagcaagc ccaagatgta gcaagcagtc cacctgagag ctccttccag 1300  
 aaactagcac ccagtgaata taggtatact ctattgaggg atcgagatga 1350  
 gcttttaaaaa cttgaaaaac agtttctaag cttttcaaca gcagcatcaa 1400  
 cctacgtggt ggaaatagta aacctatatt ttcataattc tatgtgtatt 1450  
 tttattttga ataaacagaa agaaatttaa aaaaaaaaaa aaaaaaaaaa 1500  
 aaaaaaaaaa aaaaaaaaaa aaa 1523

<210> 309

<211> 406

<212> PRT

<213> Homo sapiens

<400> 309

Met	His	Pro	Ala	Val	Phe	Leu	Ser	Leu	Pro	Asp	Leu	Arg	Cys	Ser
1				5					10					15
Leu	Leu	Leu	Leu	Val	Thr	Trp	Val	Phe	Thr	Pro	Val	Thr	Thr	Glu
				20					25					30
Ile	Thr	Ser	Leu	Ala	Thr	Glu	Asn	Ile	Asp	Glu	Ile	Leu	Asn	Asn
				35					40					45
Ala	Asp	Val	Ala	Leu	Val	Asn	Phe	Tyr	Ala	Asp	Trp	Cys	Arg	Phe
				50					55					60
Ser	Gln	Met	Leu	His	Pro	Ile	Phe	Glu	Glu	Ala	Ser	Asp	Val	Ile
				65					70					75
Lys	Glu	Glu	Phe	Pro	Asn	Glu	Asn	Gln	Val	Val	Phe	Ala	Arg	Val
				80					85					90
Asp	Cys	Asp	Gln	His	Ser	Asp	Ile	Ala	Gln	Arg	Tyr	Arg	Ile	Ser
				95					100					105
Lys	Tyr	Pro	Thr	Leu	Lys	Leu	Phe	Arg	Asn	Gly	Met	Met	Met	Lys
				110					115					120
Arg	Glu	Tyr	Arg	Gly	Gln	Arg	Ser	Val	Lys	Ala	Leu	Ala	Asp	Tyr
				125					130					135
Ile	Arg	Gln	Gln	Lys	Ser	Asp	Pro	Ile	Gln	Glu	Ile	Arg	Asp	Leu
				140					145					150
Ala	Glu	Ile	Thr	Thr	Leu	Asp	Arg	Ser	Lys	Arg	Asn	Ile	Ile	Gly
				155					160					165

Tyr	Phe	Glu	Gln	Lys	Asp	Ser	Asp	Asn	Tyr	Arg	Val	Phe	Glu	Arg	
				170					175					180	
Val	Ala	Asn	Ile	Leu	His	Asp	Asp	Cys	Ala	Phe	Leu	Ser	Ala	Phe	
				185					190					195	
Gly	Asp	Val	Ser	Lys	Pro	Glu	Arg	Tyr	Ser	Gly	Asp	Asn	Ile	Ile	
				200					205					210	
Tyr	Lys	Pro	Pro	Gly	His	Ser	Ala	Pro	Asp	Met	Val	Tyr	Leu	Gly	
				215					220					225	
Ala	Met	Thr	Asn	Phe	Asp	Val	Thr	Tyr	Asn	Trp	Ile	Gln	Asp	Lys	
				230					235					240	
Cys	Val	Pro	Leu	Val	Arg	Glu	Ile	Thr	Phe	Glu	Asn	Gly	Glu	Glu	
				245					250					255	
Leu	Thr	Glu	Glu	Gly	Leu	Pro	Phe	Leu	Ile	Leu	Phe	His	Met	Lys	
				260					265					270	
Glu	Asp	Thr	Glu	Ser	Leu	Glu	Ile	Phe	Gln	Asn	Glu	Val	Ala	Arg	
				275					280					285	
Gln	Leu	Ile	Ser	Glu	Lys	Gly	Thr	Ile	Asn	Phe	Leu	His	Ala	Asp	
				290					295					300	
Cys	Asp	Lys	Phe	Arg	His	Pro	Leu	Leu	His	Ile	Gln	Lys	Thr	Pro	
				305					310					315	
Ala	Asp	Cys	Pro	Val	Ile	Ala	Ile	Asp	Ser	Phe	Arg	His	Met	Tyr	
				320					325					330	
Val	Phe	Gly	Asp	Phe	Lys	Asp	Val	Leu	Ile	Pro	Gly	Lys	Leu	Lys	
				335					340					345	
Gln	Phe	Val	Phe	Asp	Leu	His	Ser	Gly	Lys	Leu	His	Arg	Glu	Phe	
				350					355					360	
His	His	Gly	Pro	Asp	Pro	Thr	Asp	Thr	Ala	Pro	Gly	Glu	Gln	Ala	
				365					370					375	
Gln	Asp	Val	Ala	Ser	Ser	Pro	Pro	Glu	Ser	Ser	Phe	Gln	Lys	Leu	
				380					385					390	
Ala	Pro	Ser	Glu	Tyr	Arg	Tyr	Thr	Leu	Leu	Arg	Asp	Arg	Asp	Glu	
				395					400					405	

Leu

<210> 310  
 <211> 182  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure



<222> 36, 48  
<223> unknown base

<400> 310  
attaaggaag aatttccaaa tgaaaatcaa gtagtntttg ccagagtnga 50  
ttgtgatcag cactctgaca tagcccagag atacaggata agcaaatacc 100  
caaccctcaa attgtttcgt aatgggatga tgatgaagag agaatacagg 150  
ggtcagcgat cagtgaagc attggcagat ta 182

<210> 311  
<211> 598  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 38, 59, 140, 169, 174, 183, 282-283, 294-295, 319, 396  
<223> unknown base

<400> 311  
agaggcctct ctggaagttg tcccgggtgt tgcgccngg agcccgggtc 50  
gagaggacna ggtgcogctg cctggagaat cctccgctgc cgtcggctcc 100  
cggagcccag ccttttcta acccaacca acctagccn gtcccagccg 150  
ccagcgctg tccctgtcnc gganccagc gtnaccatgc atcctgccgt 200  
cttcctatcc ttaccgcacc tcagatgctc ccttctgctc ctggtaactt 250  
gggtttttac tcctgtaaca actgaaataa cnngtcttga tacnnagaat 300  
atagatgaaa ttttaaacna tgctgatgtg gctttagtca atttttatgc 350  
tgactggtgt cgtttcagtc agatgtggca tccaattttt gaggangctt 400  
ccgatgtcat taaggaagaa tttccaaatg aaaatcaagt agtgtttgcc 450  
agagttgatt gtgatcagca ctctgacata gccagagat acaggataag 500  
caaataccca accctcaaat tgtttcgtaa tgggatgatg atgaagagag 550  
aatacagggg tcagcgatca gtgaaagcat tggcagatta catcaggc 598

<210> 312  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 312  
tgagaggcct ctctggaagt tg 22

<210> 313  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 313  
 gtcagcgatc agtgaaagc 19  
  
 <210> 314  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 314  
 ccagaatgaa gtagctcggc 20  
  
 <210> 315  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 315  
 ccgactcaaa atgcattgtc 20  
  
 <210> 316  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 316  
 catttggcag gaattgtcc 19  
  
 <210> 317  
 <211> 18  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 317  
 ggtgctatag gccaaagg 18  
  
 <210> 318  
 <211> 24  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 318

ctgtatctct gggctatgtc agag 24

<210> 319

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 319

ctacatataa tggcacatgt cagcc 25

<210> 320

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 320

ogtcttcta tccttaccg acctcagatg ctcccttctg ctctg 46

<210> 321

<211> 1333

<212> DNA

<213> Homo sapiens

<400> 321

gcccacgcgt ccgatggcgt tcacgttcgc ggccttctgc tacatgctgg 50

cgctgctgct cactgccggt ctcatcttct tcgccatttg gcacattata 100

gcatttgatg agctgaagac tgattacaag aatcctatag accagtgtaa 150

tacctgaat ccccttgtag tcccagagta cctcatccac gctttcttct 200

gtgtcatgtt tctttgtgca gcagagtggc ttacactggg tctcaatatg 250

cccctcttgg catatcatat ttggaggtag atgagtagac cagtgatgag 300

tggcccagga ctctatgacc ctacaacat catgaatgca gatattctag 350

catattgtca gaaggaagga tgggtgcaat tagcttttta tcttctagca 400

tttttttact acctatatgg catgatctat gttttgtgta gctcttagaa 450

caacacacag aagaattggg ccagttaagt gcatgcaaaa agccaccaaa 500

tgaagggatt ctatccagca agatcctgtc caagagtagc ctgtggaatc 550

tgatcagtta ctttaaaaaa tgactcctta ttttttaa at gtttccacat 600  
 ttttgcttgt ggaaagactg ttttcatatg ttatactcag ataaagattt 650  
 taaatgggtat tacgtataaa ttaatatata atgattacct ctgggtgttga 700  
 caggtttgaa ctigcacttc ttaaggaaca gccataatcc tctgaatgat 750  
 gcattaatta ctgactgtcc tagtacattg gaagcttttg tttataggaa 800  
 ctgtagggc tcatttttgg ttcattgaaa cagtatctaa ttataaatta 850  
 gctgtagata tcagggtgctt ctgatgaagt gaaaatgtat atctgactag 900  
 tgggaaactt catgggtttc ctcatctgtc atgtcgatga ttatatatgg 950  
 atacatttac aaaaataaaa agcgggaatt ttcccttcgc ttgaatatta 1000  
 tccctgtata ttgcatgaat gagagatttc ccatatttcc atcagagtaa 1050  
 taaatatact tgctttaatt ctttaagcata agtaaacaatg atataaaaaat 1100  
 atatgctgaa ttacttgtga agaatgcatt taaagctatt ttaaagtgtg 1150  
 ttttatttgt aagacattac ttattaagaa attggttatt atgcttactg 1200  
 ttctaactctg gtggttaaagg tattcttaag aatttgcagg tactacagat 1250  
 tttcaaaact gaatgagaga aaattgtata accatcctgc tgttccttta 1300  
 gtgcaataca ataaaactct gaaattaaga ctc 1333

<210> 322

<211> 144

<212> PRT

<213> Homo sapiens

<400> 322

Met	Ala	Phe	Thr	Phe	Ala	Ala	Phe	Cys	Tyr	Met	Leu	Ala	Leu	Leu
1				5					10					15
Leu	Thr	Ala	Ala	Leu	Ile	Phe	Phe	Ala	Ile	Trp	His	Ile	Ile	Ala
				20					25					30
Phe	Asp	Glu	Leu	Lys	Thr	Asp	Tyr	Lys	Asn	Pro	Ile	Asp	Gln	Cys
				35					40					45
Asn	Thr	Leu	Asn	Pro	Leu	Val	Leu	Pro	Glu	Tyr	Leu	Ile	His	Ala
				50					55					60
Phe	Phe	Cys	Val	Met	Phe	Leu	Cys	Ala	Ala	Glu	Trp	Leu	Thr	Leu
				65					70					75
Gly	Leu	Asn	Met	Pro	Leu	Leu	Ala	Tyr	His	Ile	Trp	Arg	Tyr	Met
				80					85					90
Ser	Arg	Pro	Val	Met	Ser	Gly	Pro	Gly	Leu	Tyr	Asp	Pro	Thr	Thr
				95					100					105

Ile	Met	Asn	Ala	Asp	Ile	Leu	Ala	Tyr	Cys	Gln	Lys	Glu	Gly	Trp
				110					115					120
Cys	Lys	Leu	Ala	Phe	Tyr	Leu	Leu	Ala	Phe	Phe	Tyr	Tyr	Leu	Tyr
				125					130					135
Gly	Met	Ile	Tyr	Val	Leu	Val	Ser	Ser						
				140										

<210> 323  
 <211> 477  
 <212> DNA  
 <213> Homo sapiens

<400> 323  
 attatagcat ttgatgagct gaagactgat tacaagatcc tatagaccag 50  
 tgtaataccc tgaatcccct tgtactccca gactacctca tccacgcttt 100  
 cttctgtgtc atgtttcttt gtgcagcaga gtggcttaca ctgggtctca 150  
 atatgcccct cttggcatat catatttga ggtatatgag tagaccagtg 200  
 atgagtggcc caggactcta tgaccctaca accatcatga atgcagatat 250  
 tctagcatat tgtcagaagg aaggatggtg caaattagct ttttatcttc 300  
 tagcattttt ttactaccta tatggcatga tctatgtttt ggtgagctct 350  
 tagaacaaca cacagaagaa ttggtccagt taagtgcagc caaaaagcca 400  
 ccaaatagaag ggattctatc cagcaagatc ctgtccaaga gtagcctgtg 450  
 gaatctgatc agttacttta aaaaatg 477

<210> 324  
 <211> 43  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 324  
 tgtaaaacga cggccagtta aatagacctg caattattaa tct 43

<210> 325  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 325  
 caggaaacag ctatgaccac ctgcacacct gcaaattccat t 41

<210> 326

<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 326  
gtgcagcaga gtggcttaca 20

<210> 327  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 327  
actggaccaa ttcttctgtg 20

<210> 328  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 328  
gatattctag catattgtca gaaggaagga tgggtgcaa tagct 45

<210> 329  
<211> 1174  
<212> DNA  
<213> Homo sapiens

<400> 329  
cggacgcgtg ggggaaaccc ttccgagaaa acagcaacaa gctgagctgc 50  
tgtgacagag ggggaacaaga tggcggcgcc gaaggggagc ctctgggtga 100  
ggacccaact ggggctcccg ccgctgctgc tgctgaccat ggccttggcc 150  
ggaggttcgg ggaccgcttc ggctgaagca ttgactcgg tcttgggtga 200  
tacggcgtct tgccaccggg cctgtcagtt gacctacccc ttgcacacct 250  
accctaagga agaggagttg tacgcatgtc agagaggttg caggctgttt 300  
tcaatttgtc agtttgtgga tgatggaatt gacttaaate gaactaaatt 350  
ggaatgtgaa tctgcatgta cagaagcata ttcccaatct gatgagcaat 400  
atgcttgcca tcttggttgc cagaatcagc tgccattcgc tgaactgaga 450  
caagaacaac ttatgtccct gatgccaaaa atgcacctac tctttcctct 500

aactctggtg aggtcattct ggagtgacat gatggactcc gcacagagct 550  
tcataacctc ttcattggact ttttatcttc aagccgatga cggaaaaata 600  
gttatattcc agtctaagcc agaaatccag tacgcaccac atttggagca 650  
ggagcctaca aatttgagag aatcatctct aagcaaaatg tcctatctgc 700  
aaatgagaaa ttcacaagcg cacaggaatt ttcttgaaga tggagaaagt 750  
gatggctttt taagatgcct ctctcttaac tctgggtgga ttttaactac 800  
aactcttgct ctctcggtga tggatttgc ttggatttgc tgtgcaactg 850  
ttgctacagc tgtggagcag tatgttcct ctgagaagct gagtatctat 900  
ggtgacttgg agtttatgaa tgaacaaaag ctaaacagat atccagcttc 950  
ttctcttgct gttgttagat ctaaaactga agatcatgaa gaagcagggc 1000  
ctctacctac aaaagtgaat cttgctcatt ctgaaattta agcatttttc 1050  
ttttaaaaga caagtgtaat agacatctaa aattccactc ctcatagagc 1100  
ttttaaaatg gtttcattgg atataggcct taagaaatca ctataaaatg 1150  
caaataaagt tactcaaatc tgtg 1174

<210> 330  
<211> 323  
<212> PRT  
<213> Homo sapiens

<400> 330  
Met Ala Ala Pro Lys Gly Ser Leu Trp Val Arg Thr Gln Leu Gly  
1 5 10 15  
Leu Pro Pro Leu Leu Leu Leu Thr Met Ala Leu Ala Gly Gly Ser  
20 25 30  
Gly Thr Ala Ser Ala Glu Ala Phe Asp Ser Val Leu Gly Asp Thr  
35 40 45  
Ala Ser Cys His Arg Ala Cys Gln Leu Thr Tyr Pro Leu His Thr  
50 55 60  
Tyr Pro Lys Glu Glu Glu Leu Tyr Ala Cys Gln Arg Gly Cys Arg  
65 70 75  
Leu Phe Ser Ile Cys Gln Phe Val Asp Asp Gly Ile Asp Leu Asn  
80 85 90  
Arg Thr Lys Leu Glu Cys Glu Ser Ala Cys Thr Glu Ala Tyr Ser  
95 100 105  
Gln Ser Asp Glu Gln Tyr Ala Cys His Leu Gly Cys Gln Asn Gln  
110 115 120

Leu	Pro	Phe	Ala	Glu	Leu	Arg	Gln	Glu	Gln	Leu	Met	Ser	Leu	Met	
				125					130					135	
Pro	Lys	Met	His	Leu	Leu	Phe	Pro	Leu	Thr	Leu	Val	Arg	Ser	Phe	
				140					145					150	
Trp	Ser	Asp	Met	Met	Asp	Ser	Ala	Gln	Ser	Phe	Ile	Thr	Ser	Ser	
				155					160					165	
Trp	Thr	Phe	Tyr	Leu	Gln	Ala	Asp	Asp	Gly	Lys	Ile	Val	Ile	Phe	
				170					175					180	
Gln	Ser	Lys	Pro	Glu	Ile	Gln	Tyr	Ala	Pro	His	Leu	Glu	Gln	Glu	
				185					190					195	
Pro	Thr	Asn	Leu	Arg	Glu	Ser	Ser	Leu	Ser	Lys	Met	Ser	Tyr	Leu	
				200					205					210	
Gln	Met	Arg	Asn	Ser	Gln	Ala	His	Arg	Asn	Phe	Leu	Glu	Asp	Gly	
				215					220					225	
Glu	Ser	Asp	Gly	Phe	Leu	Arg	Cys	Leu	Ser	Leu	Asn	Ser	Gly	Trp	
				230					235					240	
Ile	Leu	Thr	Thr	Thr	Leu	Val	Leu	Ser	Val	Met	Val	Leu	Leu	Trp	
				245					250					255	
Ile	Cys	Cys	Ala	Thr	Val	Ala	Thr	Ala	Val	Glu	Gln	Tyr	Val	Pro	
				260					265					270	
Ser	Glu	Lys	Leu	Ser	Ile	Tyr	Gly	Asp	Leu	Glu	Phe	Met	Asn	Glu	
				275					280					285	
Gln	Lys	Leu	Asn	Arg	Tyr	Pro	Ala	Ser	Ser	Leu	Val	Val	Val	Arg	
				290					295					300	
Ser	Lys	Thr	Glu	Asp	His	Glu	Glu	Ala	Gly	Pro	Leu	Pro	Thr	Lys	
				305					310					315	
Val	Asn	Leu	Ala	His	Ser	Glu	Ile								
				320											

<210> 331

<211> 350

<212> DNA

<213> Homo sapiens

<400> 331

ttgggtgata cggcgtcttg ccaccgggcc tgtcagttga cctaccctt 50

gcacacctac cctaaggaag aggagttgta cgcattgtcag agaggttgca 100

ggctgttttc aatttgtcag tttgtggatg atggaattga cttaaactga 150

actaaattgg aatgtgaatc tgcattgtaca gaagcatatt cccaatctga 200

tgagcaatat gcttgccatc ttggttgcca gaatcagctg ccattcgctg 250



aactgagaca agaacaactt atgtccctga tgccaaaaat gcacctactc 300

tttcctctaa ctctggtgag gtcattctgg agtgacatga tggactccgc 350

<210> 332

<211> 562

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 47

<223> unknown base

<400> 332

cacactggcc ggatctttta gaggcctttg accttgacca agggctcngga 50

aaacagcaac aagctgagct gctgtgacag agggaacaag atggcggcgc 100

cgaagggagc ctttgggtga ggaccaact ggggctcccg ccgctgctgc 150

tgctgaccat ggccttggcc ggaggctcgg ggaccgcttc ggctgaagca 200

tttgactcgg tcttgggtga tacggcgtct tgccaccggg cctgtcagtt 250

gacctacccc ttgcacacct accctaagga agaggagttg tacgcatgtc 300

agagaggttg caggctgttt tcaatttgct agtttgtgga tgatggaatt 350

gacttaaato gaactaaatt ggaatgtgaa tctgcatgta cagaagcata 400

ttcccaatct gatgagcaat atgcttgcca tcttggttgc cagaatcagc 450

tgccattcgc tgaactgaga caagaacaac ttatgtccct gatgccaaaa 500

atgcacctac tctttcctct aactctggtg aggtcattct ggagtgcacat 550

gatggactcc gc 562

<210> 333

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 333

acaagctgag ctgctgtgac ag 22

<210> 334

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 334  
tgattctggc aaccaagatg gc 22

<210> 335  
<211> 40  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 335  
atggccttgg ccggaggttc ggggaccgct tcggctgaag 40

<210> 336  
<211> 1885  
<212> DNA  
<213> Homo sapiens

<400> 336  
gcgaggtggc gatcgctgag aggcaggagg gccgaggcgg gcctgggagg 50  
cggcccggag gtggggcgcc gctggggccg gcccgcacgg gcttcactctg 100  
agggcgacag gcccgcgacc gagcgtgcgg actggcctcc caagcgtggg 150  
gcgacaagct gccggagctg caatgggccc cggctgggga ttcttgtttg 200  
gcctcctggg cgccgtgtgg ctgctcagct cgggccacgg agaggagcag 250  
cccccgaga cagcggcaca gaggtgcttc tgccaggta gtggttactt 300  
ggatgattgt acctgtgatg ttgaaacat tgatagattt aataactaca 350  
ggcttttccc aagactacaa aaacttcttg aaagtgacta ctttaggtat 400  
tacaaggtaa acctgaagag gccgtgtcct ttctggaatg acatcagcca 450  
gtgtggaaga agggactgtg ctgtcaaacc atgtcaatct gatgaagttc 500  
ctgatggaat taaatctgog agctacaagt attctgaaga agccaataat 550  
ctcattgaag aatgtgaaca agctgaacga cttggagcag tggatgaatc 600  
totgagttag gaaacacaga aggctgttct tcagtggacc aagcatgatg 650  
attcttcaga taacttctgt gaagctgatg acattcagtc ccctgaagct 700  
gaatatgtag atttgcttct taatcctgag cgctacactg gttacaaggg 750  
accagatgct tggaaaatat ggaatgtcat ctacgaagaa aactgtttta 800  
agccacagac aattaaaaga cttttaaatc ctttggcttc tggtaaggg 850  
acaagtgaag agaacaactt ttacagttgg ctagaaggtc tctgtgtaga 900  
aaaagagca ttctacagac ttatatctgg cctacatgca agcattaatg 950

tgcatttgag tgcaagatat cttttacaag agacctggtt agaaaagaaa 1000  
 tggggacaca acattacaga atttcaacag cgatttgatg gaattttgac 1050  
 tgaaggagaa ggtccaagaa ggcttaagaa cttgtatatt ctctacttaa 1100  
 tagaactaag ggctttatcc aaagtgttac cattcttcga gcgcccagat 1150  
 tttcaactct ttactggaaa taaaattcag gatgaggaaa acaaaatggt 1200  
 acttctggaa atacttcacg aaatcaagtc atttcctttg cattttgatg 1250  
 agaattcatt ttttgctggg gataaaaaag aagcacacaa actaaaggag 1300  
 gactttcgac tgcattttag aaatatttca agaattatgg attgtgttg 1350  
 ttgttttaaa tgtcgtctgt ggggaaagct tcagactcag ggtttgggca 1400  
 ctgctctgaa gatcttattt tctgagaaat tgatagcaaa tatgccagaa 1450  
 agtggaccta gttatgaatt ccatctaacc agacaagaaa tagtatcatt 1500  
 attcaacgca tttggaagaa tttctacaag tgtgaaagaa ttagaaaact 1550  
 tcaggaactt gttacagaat attcatttaa gaaaacaagc tgatatgtgc 1600  
 ctgtttctgg acaatggagg cgaaagagtg gaatttcatt caaaggcata 1650  
 atagcaatga cagtcttaag ccaaacattt tatataaagt tgcttttgta 1700  
 aaggagaatt atattgtttt aagtaaacac atttttaaaa attgtgttaa 1750  
 gtctatgtat aatactactg tgagtaaaag taatacttta ataatgtggt 1800  
 acaaatttta aagtttaata ttgaataaaa ggaggattat caaattaaaa 1850  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaa 1885

<210> 337  
 <211> 468  
 <212> PRT  
 <213> Homo sapiens

<400> 337  
 Met Gly Arg Gly Trp Gly Phe Leu Phe Gly Leu Leu Gly Ala Val  
 1 5 10 15  
 Trp Leu Leu Ser Ser Gly His Gly Glu Glu Gln Pro Pro Glu Thr  
 20 25 30  
 Ala Ala Gln Arg Cys Phe Cys Gln Val Ser Gly Tyr Leu Asp Asp  
 35 40 45  
 Cys Thr Cys Asp Val Glu Thr Ile Asp Arg Phe Asn Asn Tyr Arg  
 50 55 60  
 Leu Phe Pro Arg Leu Gln Lys Leu Leu Glu Ser Asp Tyr Phe Arg  
 65 70 75

Tyr	Tyr	Lys	Val	Asn	Leu	Lys	Arg	Pro	Cys	Pro	Phe	Trp	Asn	Asp		80	85	90
Ile	Ser	Gln	Cys	Gly	Arg	Arg	Asp	Cys	Ala	Val	Lys	Pro	Cys	Gln		95	100	105
Ser	Asp	Glu	Val	Pro	Asp	Gly	Ile	Lys	Ser	Ala	Ser	Tyr	Lys	Tyr		110	115	120
Ser	Glu	Glu	Ala	Asn	Asn	Leu	Ile	Glu	Glu	Cys	Glu	Gln	Ala	Glu		125	130	135
Arg	Leu	Gly	Ala	Val	Asp	Glu	Ser	Leu	Ser	Glu	Glu	Thr	Gln	Lys		140	145	150
Ala	Val	Leu	Gln	Trp	Thr	Lys	His	Asp	Asp	Ser	Ser	Asp	Asn	Phe		155	160	165
Cys	Glu	Ala	Asp	Asp	Ile	Gln	Ser	Pro	Glu	Ala	Glu	Tyr	Val	Asp		170	175	180
Leu	Leu	Leu	Asn	Pro	Glu	Arg	Tyr	Thr	Gly	Tyr	Lys	Gly	Pro	Asp		185	190	195
Ala	Trp	Lys	Ile	Trp	Asn	Val	Ile	Tyr	Glu	Glu	Asn	Cys	Phe	Lys		200	205	210
Pro	Gln	Thr	Ile	Lys	Arg	Pro	Leu	Asn	Pro	Leu	Ala	Ser	Gly	Gln		215	220	225
Gly	Thr	Ser	Glu	Glu	Asn	Thr	Phe	Tyr	Ser	Trp	Leu	Glu	Gly	Leu		230	235	240
Cys	Val	Glu	Lys	Arg	Ala	Phe	Tyr	Arg	Leu	Ile	Ser	Gly	Leu	His		245	250	255
Ala	Ser	Ile	Asn	Val	His	Leu	Ser	Ala	Arg	Tyr	Leu	Leu	Gln	Glu		260	265	270
Thr	Trp	Leu	Glu	Lys	Lys	Trp	Gly	His	Asn	Ile	Thr	Glu	Phe	Gln		275	280	285
Gln	Arg	Phe	Asp	Gly	Ile	Leu	Thr	Glu	Gly	Glu	Gly	Pro	Arg	Arg		290	295	300
Leu	Lys	Asn	Leu	Tyr	Phe	Leu	Tyr	Leu	Ile	Glu	Leu	Arg	Ala	Leu		305	310	315
Ser	Lys	Val	Leu	Pro	Phe	Phe	Glu	Arg	Pro	Asp	Phe	Gln	Leu	Phe		320	325	330
Thr	Gly	Asn	Lys	Ile	Gln	Asp	Glu	Glu	Asn	Lys	Met	Leu	Leu	Leu		335	340	345
Glu	Ile	Leu	His	Glu	Ile	Lys	Ser	Phe	Pro	Leu	His	Phe	Asp	Glu		350	355	360
Asn	Ser	Phe	Phe	Ala	Gly	Asp	Lys	Lys	Glu	Ala	His	Lys	Leu	Lys				

	365		370		375
Glu Asp Phe Arg	Leu His Phe Arg Asn	Ile Ser Arg Ile Met	Asp		
	380	385	390		
Cys Val Gly Cys	Phe Lys Cys Arg Leu	Trp Gly Lys Leu Gln	Thr		
	395	400	405		
Gln Gly Leu Gly	Thr Ala Leu Lys Ile	Leu Phe Ser Glu Lys	Leu		
	410	415	420		
Ile Ala Asn Met	Pro Glu Ser Gly Pro	Ser Tyr Glu Phe His	Leu		
	425	430	435		
Thr Arg Gln Glu	Ile Val Ser Leu Phe	Asn Ala Phe Gly Arg	Ile		
	440	445	450		
Ser Thr Ser Val	Lys Glu Leu Glu Asn	Phe Arg Asn Leu Leu	Gln		
	455	460	465		

Asn Ile His

<210> 338  
 <211> 507  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 101, 263, 376, 397, 426  
 <223> unknown base

<400> 338  
 gctggaaata tggatgtcat ctacgagaaa ctgttttaag ccacagacaa 50  
 ttaaaagacc tttaaatacct ttggcttctg gtcaagggac aagtgaagag 100  
 nacacttttt acagttggct agaaggtctc tgtgtagaaa aaagagcatt 150  
 ctacagactt atatctggcc tacatgcaag cattaatgtg catttgagtg 200  
 caagatatct tttaacaagag acctgggttag aaaagaaatg gggacacaac 250  
 attacagaat ttnaacagcg atttgatgga attttgactg aaggagaagg 300  
 tccaagaagg cttaagaact tgtattttct ctacttaata gaactaaggg 350  
 ctttatccaa agtggttacca ttcttngagc gccagattt tcaactnttt 400  
 actggaaata aaattcagga tgaggnaaac aaaatgttac ttttggaat 450  
 acttcatgaa atcaagtcatt ttcctttgca ttttgatgag aattcatttt 500  
 tttgctg 507

<210> 339  
 <211> 20

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 339  
aagctgccgg agctgcaatg 20

<210> 340  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 340  
ttgcttctta atcctgagcg c 21

<210> 341  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 341  
aaaggaggac tttcgactgc 20

<210> 342  
<211> 26  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 342  
agagattcat ccactgctcc aagtcg 26

<210> 343  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 343  
tgtccagaaa caggcacata tcagc 25

<210> 344  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 344

agacagcggc acagaggtgc ttctgccagg ttagtggtta cttggatgat 50

<210> 345

<211> 1486

<212> DNA

<213> Homo sapiens

<400> 345

cggacgcgtg ggcggacgcg tgggacgcg cgtgggttg gagggggcag 50

gatgggaggg aaagtgaaga aaacagaaaa ggagagggac agaggccaga 100

ggactttctca tactggacag aaaccgatca ggcatggaac tccccttcgt 150

cactcaoctg ttcttgcccc tgggtgttct gacaggtctc tgctccccct 200

ttaacctgga tgaacatcac ccacgcctat tcccagggcc accagaagct 250

gaatttgat acagtgtctt acaacatgtt gggggtggac agcgatgat 300

gctggtgggc gccccctggg atgggccttc aggcgaccg aggggggacg 350

tttatcgctg cctgtaggg ggggccaca atgccccatg tgccaagggc 400

cacttaggtg actaccaact gggaaattca tctcatcctg ctgtgaatat 450

gcacctgggg atgtctctgt tagagacaga tggatgatgg ggattcatgg 500

tgagctaagg agaggggtgg ggcagtgtct ctgaaggctc ataaaagaaa 550

aaagagaagt gtggttaagg aaaatggtct gtgtggagg gtcaaggagt 600

taaaaacct agaaagcaaa aggtaggtaa tgtcaggag tagtcttcat 650

gcctccttca actgggagca tgttctgagg gtgccctccc aagcctggga 700

gtaactatct ccccatccc caggcctgtg cccctctctg gtctcgtgct 750

tgtggcagct ctgtcttcag ttctgggata tgtgcccgtg tggatgcttc 800

attccagcct cagggaagcc tggcaccac tgcccaacgt gagccagag 850

aaggctgagt acttggttcc cagaaggaga tactgggtgg gaaaaagatg 900

gggcaaagcg gtatgatgcc tggcaaagg cctgcatggc taccctcatt 950

gctacctaata gtgcttgcaa aagctccatg tttcctaaca gattcagact 1000

cctggccagg tgtggtggcc cacacctgta attctagcac tttgggaggc 1050

caagggtggc agatcacttg aggtcaggag ttcaagacca gcctggccaa 1100

catggtgaaa ctccatctct actaaaaaaaa aaaaaatata aaaattagct 1150

ggggtgcgcta gtgcatgcct gtaatctcat ctactcggga ggctaagaca 1200  
 ggagactctc acttcaaccc aggaggtgga ggttgcggtg agccaagatt 1250  
 gtgcctctgc actctagcgt gggtgacaga gtaagcgaga ctccatctca 1300  
 aaaataataa taataataat tcagactcct tatcaggagt ccatgatctg 1350  
 gcctggcaca gtaactcatg cctgtaatcc caacattttg ggaggccaac 1400  
 gcaggaggat tgcttgaggt ctggagggtt gagaccagcc tgggcaacat 1450  
 agaaagaccc catctctaaa taaatgtttt aaaaat 1486

<210> 346

<211> 124

<212> PRT

<213> Homo sapiens

<400> 346

Met	Glu	Leu	Pro	Phe	Val	Thr	His	Leu	Phe	Leu	Pro	Leu	Val	Phe
1				5					10					15
Leu	Thr	Gly	Leu	Cys	Ser	Pro	Phe	Asn	Leu	Asp	Glu	His	His	Pro
				20					25					30
Arg	Leu	Phe	Pro	Gly	Pro	Pro	Glu	Ala	Glu	Phe	Gly	Tyr	Ser	Val
				35					40					45
Leu	Gln	His	Val	Gly	Gly	Gly	Gln	Arg	Trp	Met	Leu	Val	Gly	Ala
				50					55					60
Pro	Trp	Asp	Gly	Pro	Ser	Gly	Asp	Arg	Arg	Gly	Asp	Val	Tyr	Arg
				65					70					75
Cys	Pro	Val	Gly	Gly	Ala	His	Asn	Ala	Pro	Cys	Ala	Lys	Gly	His
				80					85					90
Leu	Gly	Asp	Tyr	Gln	Leu	Gly	Asn	Ser	Ser	His	Pro	Ala	Val	Asn
				95					100					105
Met	His	Leu	Gly	Met	Ser	Leu	Leu	Glu	Thr	Asp	Gly	Asp	Gly	Gly
				110					115					120
Phe	Met	Val	Ser											

<210> 347

<211> 509

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 22

<223> unknown base

<400> 347



cacagttccc caccatcaact cntcccatc cttccaactt tatttttagc 50  
 ttgccattgg gagggggcag gatgggaggg aaagtgaaga aaacagaaaa 100  
 ggagagggac agaggccaga ggactttctca tactggacag aaaccgatca 150  
 ggcatggaac tccccttctg cactcacctg ttcttgcccc tgggtgttcct 200  
 gacaggtctc tgctccccct ttaacctgga tgaacatcac ccacgcctat 250  
 tccaggggcc accagaagct gaatttggat acagtgtctt acaacatggt 300  
 gggggtggac agcgatggat gctggtgggc gcccctggg atgggccttc 350  
 aggcgaccgg aggggggacg tttatcgctg ccctgtaggg ggggcccaca 400  
 atgccccatg tgccaagggc cacttaggtg actaccaact gggaaattca 450  
 tctcatcctg ctgtgaatat gcacctgggg atgtctctgt tagagacaga 500  
 tggatgatg 509

<210> 348

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 348

agggacagag gccagaggac ttc 23

<210> 349

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 349

caggtgcata ttcacagcag gatg 24

<210> 350

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 350

ggaactcccc ttctgtaact acctgttctt gcccctgggtg ttcct 45

<210> 351

<211> 2056

<212> DNA

<213> Homo sapiens

<400> 351

aaagttacat tttctctgga actctcctag gccactccct gctgatgcaa 50  
catctggggt tgggcagaaa ggagggtgct tcggagcccg ccctttctga 100  
gcttcctggg ccggctctag aacaattcag gcttcgctgc gactcagacc 150  
tcagctccaa catatgcatt ctgaagaaag atggctgaga tggacagaat 200  
gctttatfff ggaaagaaac aatgttctag gtcaaactga gtctacaaa 250  
tgcagacttt cacaatgggt ctagaagaaa tctggacaag tcttttcatg 300  
tggtttttct acgcattgat tccatgtttg ctacagatg aagtggccat 350  
tctgcctgcc cctcagaacc tctctgtact ctcaaccaac atgaagcatc 400  
tcttgatgtg gagcccagtg atcgcgcctg gagaaacagt gtactattct 450  
gtcgaatacc agggggagta cgagagcctg tacacgagcc acatctggat 500  
ccccagcagc tgggtgtcac tcaactgaagg tcctgagtgt gatgtcactg 550  
atgacatcac ggccactgtg ccatacaacc ttcgtgtcag ggccacattg 600  
gggtcacaga cctcagcctg gagcatcctg aagcatccct ttaatagaaa 650  
ctcaaccatc cttacccgac ctgggatgga gatcacaaa gatggcctcc 700  
acctggttat tgagctggag gacctggggc ccagtttga gtcccttggtg 750  
gcctactgga ggaggagcc tgggtccgag gaacatgtca aaatgggtgag 800  
gagtgggggt attccagtgc acctagaaac catggagcca ggggctgcat 850  
actgtgtgaa ggcccagaca ttcgtgaagg ccattgggag gtacagcgcc 900  
ttcagccaga cagaatgtgt ggaggtgcaa ggagaggcca tccccctggt 950  
actggccctg tttgcctttg ttggcttcat gctgacctt gtggctcgtgc 1000  
cactgttcgt ctggaaaatg ggccggctgc tccagtactc ctgttgcccc 1050  
gtgggtggtcc tcccagacac cttgaaaata accaattcac ccagaaagt 1100  
aatcagctgc agaaggagg aggtggatgc ctgtgccacg gctgtgatgt 1150  
ctcctgagga actcctcagg gcctggatct cataggtttg cggaagggcc 1200  
caggtgaagc cgagaacctg gtctgcatga catggaaacc atgaggggac 1250  
aagttgtgtt tctgttttcc gccacggaca agggatgaga gaagtaggaa 1300  
gagcctgttg tctacaagtc tagaagcaac catcagaggc aggtgtgttt 1350  
gtctaacaga aactgactg aggcctaggg gatgtgacct ctagactggg 1400

ggctgccact tgctggctga gcaaccctgg gaaaagtgac ttcacccctt 1450  
 cggtcctaag ttttctcatc tgtaatgggg gaattaccta cacacctgct 1500  
 aaacacacac acacagagtc tctctctata tatacacacg tacacataaa 1550  
 tacaccagc acttgcaagg ctagaggga actggtgaca ctctacagtc 1600  
 tgactgattc agtgtttctg gagagcagga cataaatgta tgatgagaat 1650  
 gatcaaggac tctacacact ggggtggcttg gagagcccac tttcccagaa 1700  
 taatccttga gagaaaagga atcatgggag caatggtgtt gagttcactt 1750  
 caagcccaat gccggtgcag aggggaatgg cttagcgagc tctacagtag 1800  
 gtgacctgga ggaaggtcac agccacactg aaaatgggat gtgcatgaac 1850  
 acggaggatc catgaactac tgtaaagtgt tgacagtgtg tgcacactgc 1900  
 agacagcagg tgaaatgtat gtgtgcaatg cgacgagaat gcagaagtca 1950  
 gtaacatgtg catgtttgtt gtgctccttt tttctgttgg taaagtacag 2000  
 aattcagcaa ataaaaaggg ccaccctggc caaaagcggg aaaaaaaaaa 2050  
 aaaaaa 2056

<210> 352

<211> 311

<212> PRT

<213> Homo sapiens

<400> 352

Met	Gln	Thr	Phe	Thr	Met	Val	Leu	Glu	Glu	Ile	Trp	Thr	Ser	Leu
1				5					10					15
Phe	Met	Trp	Phe	Phe	Tyr	Ala	Leu	Ile	Pro	Cys	Leu	Leu	Thr	Asp
			20						25					30
Glu	Val	Ala	Ile	Leu	Pro	Ala	Pro	Gln	Asn	Leu	Ser	Val	Leu	Ser
			35						40					45
Thr	Asn	Met	Lys	His	Leu	Leu	Met	Trp	Ser	Pro	Val	Ile	Ala	Pro
			50						55					60
Gly	Glu	Thr	Val	Tyr	Tyr	Ser	Val	Glu	Tyr	Gln	Gly	Glu	Tyr	Glu
			65						70					75
Ser	Leu	Tyr	Thr	Ser	His	Ile	Trp	Ile	Pro	Ser	Ser	Trp	Cys	Ser
			80						85					90
Leu	Thr	Glu	Gly	Pro	Glu	Cys	Asp	Val	Thr	Asp	Asp	Ile	Thr	Ala
			95						100					105
Thr	Val	Pro	Tyr	Asn	Leu	Arg	Val	Arg	Ala	Thr	Leu	Gly	Ser	Gln
			110						115					120

Thr Ser Ala Trp	Ser Ile Leu Lys His	Pro Phe Asn Arg Asn Ser	125	130	135
Thr Ile Leu Thr	Arg Pro Gly Met Glu	Ile Thr Lys Asp Gly Phe	140	145	150
His Leu Val Ile	Glu Leu Glu Asp Leu	Gly Pro Gln Phe Glu Phe	155	160	165
Leu Val Ala Tyr	Trp Arg Arg Glu Pro	Gly Ala Glu Glu His Val	170	175	180
Lys Met Val Arg	Ser Gly Gly Ile Pro	Val His Leu Glu Thr Met	185	190	195
Glu Pro Gly Ala	Ala Tyr Cys Val Lys	Ala Gln Thr Phe Val Lys	200	205	210
Ala Ile Gly Arg	Tyr Ser Ala Phe Ser	Gln Thr Glu Cys Val Glu	215	220	225
Val Gln Gly Glu	Ala Ile Pro Leu Val	Leu Ala Leu Phe Ala Phe	230	235	240
Val Gly Phe Met	Leu Ile Leu Val Val	Val Pro Leu Phe Val Trp	245	250	255
Lys Met Gly Arg	Leu Leu Gln Tyr Ser	Cys Cys Pro Val Val Val	260	265	270
Leu Pro Asp Thr	Leu Lys Ile Thr Asn	Ser Pro Gln Lys Leu Ile	275	280	285
Ser Cys Arg Arg	Glu Glu Val Asp Ala	Cys Ala Thr Ala Val Met	290	295	300
Ser Pro Glu Glu	Leu Leu Arg Ala Trp	Ile Ser	305	310	

<210> 353

<211> 864

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 654, 711, 748, 827

<223> unknown base

<400> 353

tcctgctgat gcacatctgg gtttggcaaa aggaggttgc ttcgagccgc 50

cotttctagc ttcttgccg gctctagaac aattcaggct tcgctgcgac 100

tagacctcag ctccaacata tgcattctga agaaagatgg ctgagatgac 150

agaatgcttt attttgaaa gaaacaatgt tctaggtcaa actgagtcta 200

ccaaatgcag actttcacaa tggttctaga agaaatctgg acaagtcttt 250  
 tcatgtgggtt tttctacgca ttgattccat gtttgctcac agatgaagtg 300  
 gccattctgc ctgcccctca gaacctctct gtactctcaa ccaacatgaa 350  
 gcatctcttg atgtggagcc cagtgatcgc gcctggagaa acagtgtact 400  
 attctgtoga ataccagggg gagtacgaga gcctgtacac gagccacatc 450  
 tggatcccca gcagctgggtg ctactcact gaaggtcctg agtgtgatgt 500  
 cactgatgac atcacggcca ctgtgccata caacctttgt gtcagggcca 550  
 cattgggctc acagacctca gcctggagca tcctgaagca tccctttaat 600  
 agaaactcaa ccataccttac ccgacctggg atggagatca ccaaagatgg 650  
 cttncacctg gttattgagc tggaggacct ggggccccag tttgagttcc 700  
 ttgtggccta ntggaggagg ggcgaacccc ttgcggcgca aggggttngc 750  
 gaaccocctg cggccgctgg ggtatctctc gagaaaagag aggcccaata 800  
 tgaccacat actcaatatg gacgaantgc tattgtccac ctgtttgagt 850  
 ggcgctgggt tgat 864

<210> 354

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 354

aggcttcgct gcgactagac ctc 23

<210> 355

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 355

ccaggtcggg taaggatggg tgag 24

<210> 356

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 356  
tttctacgca ttgattccat gtttgctcac agatgaagtg gccattctgc 50

<210> 357  
<211> 1670  
<212> DNA  
<213> Homo sapiens

<400> 357  
cccacgcgtc cgcccacgcg tccgagggac aagagagaag agagactgaa 50  
acagggagaa gaggcaggag aggaggaggt ggggagagca cgaagctgga 100  
ggccgacact gagggagggc gggaggaggt gaagaaggag agaggggaga 150  
agaggcagga gctggaaagg agagagggag gaggaggagg agatgcggga 200  
tgggacactg gagttaggtg gcttgggaga gcttaatgaa aagagaacgg 250  
agaggaggtg tgggttagga accaagaggt agccctgtgg gcagcagaag 300  
gctgagagga gtaggaagat caggagctag agggagactg gagggttccg 350  
ggaaaagagc agaggaaaga ggaaagacac agagagacgg gagagagaag 400  
aagagtgggt ttgaagggcg gatctcagtc cctggctgct ttggcatttg 450  
gggaactggg actccctgtg gggaggagag gaaagctgga agtcctggag 500  
ggacagggtc ccagaaggag gggacagagg agctgagaga ggggggcagg 550  
gcgttgggca ggggtccctc ggaggcctcc tggggatggg ggctgcagct 600  
cgtctgagcg cccctcgagc gctggtactc tgggctgcac tgggggcagc 650  
agctcacatc ggaccagcac ctgaccocga ggactggtgg agctacaagg 700  
ataatctcca gggaaacttc gtgccagggc ctcccttctg gggcctggtg 750  
aatgcagcgt ggagtctgtg tgctgtgggg aagcggcaga gccccgtgga 800  
tgtggagctg aagaggggtc tttatgacct ctttctgccc ccattaaggc 850  
tcagcactgg aggagagaag ctccggggaa ccttgtacaa caccggccga 900  
catgtctcct tcctgcctgc accccgacct gtggtcaatg tgtctggagg 950  
tcccctcctt tacagccacc gactcagtga actgcggctg ctgtttggag 1000  
ctcgcgacgg agccggctcg gaacatcaga tcaaccacca gggcttctct 1050  
gctgaggtgc agctcattca cttcaaccag gaactctacg ggaatttcag 1100  
cgctgcctcc cgcgccccc atggcctggc cattctcagc ctctttgtca 1150  
acgttgccag tacctctaac ccattctca gtcgcctcct taaccgcgac 1200  
accatcactc gcatctocta caagaatgat gcctactttc ttcaagacct 1250

gagcctggag ctctgttcc ctgaatcctt cggcttcac acctatcagg 1300  
 gctctctcag caccocgccc tgctccgaga ctgtcacctg gacccctcatt 1350  
 gaccgggccc tcaatatcac ctcccttcag atgcactccc tgagactcct 1400  
 gagccagaat cctccatctc agatcttcca gagcctcagc ggtaacagcc 1450  
 ggcccctgca gcccttggcc cacagggcac tgaggggcaa cagggacccc 1500  
 cggcaccocg agaggcgctg ccgaggcccc aactaccgcc tgcattgtgga 1550  
 tgggtgtcccc catggctcgt gagactcccc ttccaggatt gcacccgccc 1600  
 gtcctaagcc tccccacaag gcgaggggag ttaccctaa aacaaagcta 1650  
 ttaaaggac agaatactta 1670

<210> 358

<211> 328

<212> PRT

<213> Homo sapiens

<400> 358

Met	Gly	Ala	Ala	Ala	Arg	Leu	Ser	Ala	Pro	Arg	Ala	Leu	Val	Leu	1	5	10	15
Trp	Ala	Ala	Leu	Gly	Ala	Ala	Ala	His	Ile	Gly	Pro	Ala	Pro	Asp	20	25	30	
Pro	Glu	Asp	Trp	Trp	Ser	Tyr	Lys	Asp	Asn	Leu	Gln	Gly	Asn	Phe	35	40	45	
Val	Pro	Gly	Pro	Pro	Phe	Trp	Gly	Leu	Val	Asn	Ala	Ala	Trp	Ser	50	55	60	
Leu	Cys	Ala	Val	Gly	Lys	Arg	Gln	Ser	Pro	Val	Asp	Val	Glu	Leu	65	70	75	
Lys	Arg	Val	Leu	Tyr	Asp	Pro	Phe	Leu	Pro	Pro	Leu	Arg	Leu	Ser	80	85	90	
Thr	Gly	Gly	Glu	Lys	Leu	Arg	Gly	Thr	Leu	Tyr	Asn	Thr	Gly	Arg	95	100	105	
His	Val	Ser	Phe	Leu	Pro	Ala	Pro	Arg	Pro	Val	Val	Asn	Val	Ser	110	115	120	
Gly	Gly	Pro	Leu	Leu	Tyr	Ser	His	Arg	Leu	Ser	Glu	Leu	Arg	Leu	125	130	135	
Leu	Phe	Gly	Ala	Arg	Asp	Gly	Ala	Gly	Ser	Glu	His	Gln	Ile	Asn	140	145	150	
His	Gln	Gly	Phe	Ser	Ala	Glu	Val	Gln	Leu	Ile	His	Phe	Asn	Gln	155	160	165	
Glu	Leu	Tyr	Gly	Asn	Phe	Ser	Ala	Ala	Ser	Arg	Gly	Pro	Asn	Gly				

	170		175		180
Leu Ala Ile Leu	Ser Leu Phe Val Asn	Val Ala Ser Thr Ser	Asn		
	185		190		195
Pro Phe Leu Ser	Arg Leu Leu Asn Arg	Asp Thr Ile Thr Arg	Ile		
	200		205		210
Ser Tyr Lys Asn	Asp Ala Tyr Phe Leu	Gln Asp Leu Ser Leu	Glu		
	215		220		225
Leu Leu Phe Pro	Glu Ser Phe Gly Phe	Ile Thr Tyr Gln Gly	Ser		
	230		235		240
Leu Ser Thr Pro	Pro Cys Ser Glu Thr	Val Thr Trp Ile Leu	Ile		
	245		250		255
Asp Arg Ala Leu	Asn Ile Thr Ser Leu	Gln Met His Ser Leu	Arg		
	260		265		270
Leu Leu Ser Gln	Asn Pro Pro Ser Gln	Ile Phe Gln Ser Leu	Ser		
	275		280		285
Gly Asn Ser Arg	Pro Leu Gln Pro Leu	Ala His Arg Ala Leu	Arg		
	290		295		300
Gly Asn Arg Asp	Pro Arg His Pro Glu	Arg Arg Cys Arg Gly	Pro		
	305		310		315
Asn Tyr Arg Leu	His Val Asp Gly Val	Pro His Gly Arg			
	320		325		

<210> 359

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 359

tctgctgagg tgcagctcat tcac 24

<210> 360

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 360

gaggctctgg aagatctgag atgg 24

<210> 361

<211> 50

<212> DNA

<213> Artificial Sequence



<220>

<223> Synthetic oligonucleotide probe

<400> 361

gcctctttgt caacgttgcc agtacctcta acccattcct cagtcgcctc 50

<210> 362

<211> 3038

<212> DNA

<213> Homo sapiens

<400> 362

ggcgcctggt tctgcgcgta ctggctgtac ggagcaggag caagaggtcg 50

ccgccagcct ccgccgccga gcctcggttcg tgtccccgcc cctcgctcct 100

gcagctactg ctcagaaacg ctggggcgcc caccctggca gactaacgaa 150

gcagctccct tcccaccca actgcaggtc taattttgga cgctttgcct 200

gccatttctt ccaggttgag ggagccgcag agggcgaggc tcgctgtattc 250

ctgcagtcag caccacgtc gcccccgac gctcggtgct caggcccttc 300

gcgagcgggg ctctccgtct gcggtccctt gtgaaggctc tgggcggctg 350

cagaggccgg ccgtccggtt tggctcacct ctcccaggaa acttcacact 400

ggagagccaa aaggagtgga agagcctgtc ttggagattt tcctggggaa 450

atcctgaggt cattcattat gaagtgtacc gcgcgggagt ggctcagagt 500

aaccacagtg ctgttcatgg ctagagcaat tccagccatg gtggttccca 550

atgccacttt attggagaaa cttttggaaa aatacatgga tgaggatggt 600

gagtgggtgga tagccaaaca acgagggaaa agggccatca cagacaatga 650

catgcagagt attttggacc ttcataataa attacgaagt cagggtgtatc 700

caacagcctc taatatggag tatatgacat gggatgtaga gctggaaaga 750

tctgcagaat cctgggctga aagttgcttg tgggaacatg gacctgcaag 800

cttgcttcca tcaattggac agaatttggg agcacactgg ggaagatata 850

ggcccccgac gtttcatgta caatcgtggt atgatgaagt gaaagacttt 900

agctacccat atgaacatga atgcaacca tattgtccat tcagggtgttc 950

tggccctgta tgtacacatt atacacaggc cgtgtgggca actagtaaca 1000

gaatcggttg tgccattaat ttgtgtcata acatgaacat ctgggggcag 1050

atatggccca aagctgtcta cctggtgtgc aattactccc caaagggaaa 1100

ctggtggggc catgcccctt acaaacatgg gcggccctgt tctgcttgcc 1150

cacctagttt tggagggggc tgtagagaaa atctgtgcta caaagaaggg 1200  
tcagacaggt attatcccc tcgagaagag gaaacaaatg aaatagaacg 1250  
acagcagtca caagtccatg acacccatgt ccggacaaga tcagatgata 1300  
gtagcagaaa tgaagtcata agcgcacagc aaatgtccca aattgtttct 1350  
tgtgaagtaa gattaagaga tcagtgcata ggaacaacct gcaataggta 1400  
cgaatgtcct gctggctgtt tggatagtaa agctaaagtt attggcagt 1450  
tacattatga aatgcaatcc agcatctgta gagctgcaat tcattatggt 1500  
ataatagaca atgatggtgg ctgggtagat atcactagac aaggaagaaa 1550  
gcattatttc atcaagtcca atagaaatgg tattcaaaca attggcaa 1600  
atcagtctgc taattccttc acagtctcta aagtaacagt tcaggctgtg 1650  
acttgtgaaa caactgtgga acagctctgt ccatttcata agcctgcttc 1700  
acattgccc agagtatact gtctctgtaa ctgtatgcaa gcaaatccac 1750  
attatgctcg tgtaattgga actcgagttt attctgatct gtccagtatc 1800  
tgcagagcag cagtacatgc tggagtgggt cgaaatcacg gtggttatgt 1850  
tgatgtaatg cctgtggaca aaagaaagac ctacattgct tcttttcaga 1900  
atggaatctt ctcagaaagt ttacagaatc ctccaggagg aaaggcattc 1950  
agagtgtttg ctgttgtgtg aaactgaata cttggaagag gaccataaag 2000  
actattccaa atgcaatatt tctgaatttt gtataaaact gtaacattac 2050  
tgtacagagt acatcaacta ttttcagccc aaaaagggtgc caaatgcata 2100  
taaactctga taaacaaagt ctataaaata aaacatggga cattagcttt 2150  
gggaaaagta atgaaaatat aatggtttta gaaatcctgt gttaaatatt 2200  
gctatatttt cttagcagtt atttctacag ttaattacat agtcatgatt 2250  
gttctacgtt tcatatatta tatggtgctt tgtatatgcc actaataaaa 2300  
tgaatctaaa cattgaatgt gaatggccct cagaaaatca tctagtgc 2350  
ttaaaaataa tcgactctaa aactgaaaga aaccttatca cattttcccc 2400  
agttcaatgc tatgccatta ccaactccaa ataatctcaa ataattttcc 2450  
acttaataac tgtaaagttt ttttctgtta atttaggc 2500  
aaattctgat attgcacttc ttattttata taaaataatc ctttaatatc 2550  
caaatgaatc tgtaaaaatg tttgattcct tgggaatggc cttaaaaata 2600

aatgtaataa agtcagagtg gtggtatgaa aacattccta gtgatcatgt 2650  
 agtaaatagta gggtaagca tggacagcca gagctttcta tgtactgtta 2700  
 aaattgaggt cacatatattt cttttgtatc ctggcaaata ctctgcagg 2750  
 ccaggaagta taatagcaaa aagttgaaca aagatgaact aatgtattac 2800  
 attaccattg ccaactgattt tttttaaatg gtaaatagacc ttgtatataa 2850  
 atattgccat atcatggtac ctataatggt gatatatattg tttctatgaa 2900  
 aaatgtattg tgctttgata ctaaaaatct gtaaaatggt agtttttggt 2950  
 attttttttc tgctggtgga tttacatatt aaattttttc tgctggtgga 3000  
 taaacattaa aattaatcat gtttcaaaaa aaaaaaaaa 3038

<210> 363

<211> 500

<212> PRT

<213> Homo sapiens

<400> 363

Met	Lys	Cys	Thr	Ala	Arg	Glu	Trp	Leu	Arg	Val	Thr	Thr	Val	Leu
1				5					10					15
Phe	Met	Ala	Arg	Ala	Ile	Pro	Ala	Met	Val	Val	Pro	Asn	Ala	Thr
				20					25					30
Leu	Leu	Glu	Lys	Leu	Leu	Glu	Lys	Tyr	Met	Asp	Glu	Asp	Gly	Glu
				35					40					45
Trp	Trp	Ile	Ala	Lys	Gln	Arg	Gly	Lys	Arg	Ala	Ile	Thr	Asp	Asn
				50					55					60
Asp	Met	Gln	Ser	Ile	Leu	Asp	Leu	His	Asn	Lys	Leu	Arg	Ser	Gln
				65					70					75
Val	Tyr	Pro	Thr	Ala	Ser	Asn	Met	Glu	Tyr	Met	Thr	Trp	Asp	Val
				80					85					90
Glu	Leu	Glu	Arg	Ser	Ala	Glu	Ser	Trp	Ala	Glu	Ser	Cys	Leu	Trp
				95					100					105
Glu	His	Gly	Pro	Ala	Ser	Leu	Leu	Pro	Ser	Ile	Gly	Gln	Asn	Leu
				110					115					120
Gly	Ala	His	Trp	Gly	Arg	Tyr	Arg	Pro	Pro	Thr	Phe	His	Val	Gln
				125					130					135
Ser	Trp	Tyr	Asp	Glu	Val	Lys	Asp	Phe	Ser	Tyr	Pro	Tyr	Glu	His
				140					145					150
Glu	Cys	Asn	Pro	Tyr	Cys	Pro	Phe	Arg	Cys	Ser	Gly	Pro	Val	Cys
				155					160					165
Thr	His	Tyr	Thr	Gln	Val	Val	Trp	Ala	Thr	Ser	Asn	Arg	Ile	Gly

170										175					180				
Cys	Ala	Ile	Asn	Leu	Cys	His	Asn	Met	Asn	Ile	Trp	Gly	Gln	Ile					
				185					190					195					
Trp	Pro	Lys	Ala	Val	Tyr	Leu	Val	Cys	Asn	Tyr	Ser	Pro	Lys	Gly					
				200					205					210					
Asn	Trp	Trp	Gly	His	Ala	Pro	Tyr	Lys	His	Gly	Arg	Pro	Cys	Ser					
				215					220					225					
Ala	Cys	Pro	Pro	Ser	Phe	Gly	Gly	Gly	Cys	Arg	Glu	Asn	Leu	Cys					
				230					235					240					
Tyr	Lys	Glu	Gly	Ser	Asp	Arg	Tyr	Tyr	Pro	Pro	Arg	Glu	Glu	Glu					
				245					250					255					
Thr	Asn	Glu	Ile	Glu	Arg	Gln	Gln	Ser	Gln	Val	His	Asp	Thr	His					
				260					265					270					
Val	Arg	Thr	Arg	Ser	Asp	Asp	Ser	Ser	Arg	Asn	Glu	Val	Ile	Ser					
				275					280					285					
Ala	Gln	Gln	Met	Ser	Gln	Ile	Val	Ser	Cys	Glu	Val	Arg	Leu	Arg					
				290					295					300					
Asp	Gln	Cys	Lys	Gly	Thr	Thr	Cys	Asn	Arg	Tyr	Glu	Cys	Pro	Ala					
				305					310					315					
Gly	Cys	Leu	Asp	Ser	Lys	Ala	Lys	Val	Ile	Gly	Ser	Val	His	Tyr					
				320					325					330					
Glu	Met	Gln	Ser	Ser	Ile	Cys	Arg	Ala	Ala	Ile	His	Tyr	Gly	Ile					
				335					340					345					
Ile	Asp	Asn	Asp	Gly	Gly	Trp	Val	Asp	Ile	Thr	Arg	Gln	Gly	Arg					
				350					355					360					
Lys	His	Tyr	Phe	Ile	Lys	Ser	Asn	Arg	Asn	Gly	Ile	Gln	Thr	Ile					
				365					370					375					
Gly	Lys	Tyr	Gln	Ser	Ala	Asn	Ser	Phe	Thr	Val	Ser	Lys	Val	Thr					
				380					385					390					
Val	Gln	Ala	Val	Thr	Cys	Glu	Thr	Thr	Val	Glu	Gln	Leu	Cys	Pro					
				395					400					405					
Phe	His	Lys	Pro	Ala	Ser	His	Cys	Pro	Arg	Val	Tyr	Cys	Pro	Arg					
				410					415					420					
Asn	Cys	Met	Gln	Ala	Asn	Pro	His	Tyr	Ala	Arg	Val	Ile	Gly	Thr					
				425					430					435					
Arg	Val	Tyr	Ser	Asp	Leu	Ser	Ser	Ile	Cys	Arg	Ala	Ala	Val	His					
				440					445					450					
Ala	Gly	Val	Val	Arg	Asn	His	Gly	Gly	Tyr	Val	Asp	Val	Met	Pro					
				455					460					465					

Val Asp Lys Arg Lys Thr Tyr Ile Ala Ser Phe Gln Asn Gly Ile  
470 475 480

Phe Ser Glu Ser Leu Gln Asn Pro Pro Gly Gly Lys Ala Phe Arg  
485 490 495

Val Phe Ala Val Val  
500

<210> 364  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 364  
ggacagaatt tgggagcaca ctgg 24

<210> 365  
<211> 20  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 365  
ccaagagtat actgtcctcg 20

<210> 366  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 366  
agcacagatt ttctctacag ccccc 25

<210> 367  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 367  
aaccactcca gcatgtactg ctgc 24

<210> 368  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 368

ccattcaggt gttctggccc tgtatgtaca cattatacac aggtcgtgtg 50

<210> 369

<211> 1685

<212> DNA

<213> Homo sapiens

<400> 369

gcggagacaa gcgcagagcg cagcgcacgg ccacagacag ccctgggcat 50

ccaccgacgg cgcagccgga gccagcagag ccggaaggcg cgccccgggc 100

agagaaaagcc gagcagagct ggggtggcgtc tccggggccgc cgctccgacg 150

ggccagcgcc ctccccatgt ccctgctccc acgccgcgcc cctccgggtca 200

gcatgagggt cctggcgggc gcgctgctcc tgctgctgct ggcgctgtac 250

accgcgcgtg tggacgggtc caaatgcaag tgctcccgga agggacccaa 300

gatccgctac agcgacgtga agaagctgga aatgaagcca aagtacccgc 350

actgcgagga gaagatggtt atcatcacca ccaagagcgt gtccaggtag 400

cgaggtcagg agcactgcct gcaccccaag ctgcagagca ccaagcgctt 450

catcaagtgg tacaacgcct ggaacgagaa gcgcagggtc tacgaagaat 500

aggggtgaaaa acctcagaag ggaaaactcc aaaccagttg ggagacttgt 550

gcaaaggact ttgcagatta aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 600

aaaaaaaaaa aaagcctttc tttctcacag gcataagaca caaattatat 650

attgttatga agcacttttt accaacggtc agttttttaca ttttatagct 700

gcgtgcgaaa ggcttccaga tgggagaccc atctctcttg tgctccagac 750

ttcatcacag gctgcttttt atcaaaaagg ggaaaactca tgcttttcct 800

ttttaaaaaa tgcttttttg tatttgtoca tacgtcacta tacatctgag 850

ctttataagc gcccgggagg aacaatgagc ttggtggaca catttcattg 900

cagtgttgct ccattcctag cttgggaagc ttccgcttag aggtcctggc 950

gcctcggcac agctgccacg ggctctcctg ggcttatggc cggtcacagc 1000

ctcagtgtga ctccacagtg gccctgttag ccgggcaagc aggagcaggt 1050

ctctctgcat ctgttctctg aggaactcaa gtttggttgc cagaaaaatg 1100

tgcttcattc cccctggtt aattttttaca caccctagga aacatttcca 1150

agatcctgtg atggcgagac aaatgatcct taaagaaggt gtgggggtctt 1200  
 tccaacctg aggatctctg aaagggtcac aggttcaata ttaaatgctt 1250  
 cagaagcatg tgagggtccc aacactgtca gcaaaaacct taggagaaaa 1300  
 cttaaaaata tatgaataca tgcgcaatac acagctacag acacacattc 1350  
 tgttgacaag ggaaaacott caaagcatgt ttctttccct caccacaaca 1400  
 gaacatgcag tactaaagca atatatttgt gattcccat gtaattcttc 1450  
 aatgttaaac agtgcagtcc tctttcgaaa gctaagatga ccatgcgccc 1500  
 tttcctctgt acatataccc ttaagaagcg cccctccaca cactgcccc 1550  
 cagtatatgc cgcattgtac tgctgtgtta tatgctatgt acatgtcaga 1600  
 aaccattagc attgcatgca ggtttcatat tctttctaag atggaaagta 1650  
 ataaaatata tttgaaatgt aaaaaaaaaa aaaaa 1685

<210> 370

<211> 111

<212> PRT

<213> Homo sapiens

<400> 370

Met	Ser	Leu	Leu	Pro	Arg	Arg	Ala	Pro	Pro	Val	Ser	Met	Arg	Leu
1				5					10					15
Leu	Ala	Ala	Ala	Leu	Leu	Leu	Leu	Leu	Ala	Leu	Tyr	Thr	Ala	
				20					25					30
Arg	Val	Asp	Gly	Ser	Lys	Cys	Lys	Cys	Ser	Arg	Lys	Gly	Pro	Lys
				35					40					45
Ile	Arg	Tyr	Ser	Asp	Val	Lys	Lys	Leu	Glu	Met	Lys	Pro	Lys	Tyr
				50					55					60
Pro	His	Cys	Glu	Glu	Lys	Met	Val	Ile	Ile	Thr	Thr	Lys	Ser	Val
				65					70					75
Ser	Arg	Tyr	Arg	Gly	Gln	Glu	His	Cys	Leu	His	Pro	Lys	Leu	Gln
				80					85					90
Ser	Thr	Lys	Arg	Phe	Ile	Lys	Trp	Tyr	Asn	Ala	Trp	Asn	Glu	Lys
				95					100					105
Arg	Arg	Val	Tyr	Glu	Glu									
				110										

<210> 371

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 371

cagcgccctc cccatgtccc tg 22

<210> 372

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 372

tcccaactgg tttggagttt tccc 24

<210> 373

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 373

ctccggtcag catgaggctc ctggcggccg ctgctcctgc tgctg 45

<210> 374

<211> 3113

<212> DNA

<213> Homo sapiens

<400> 374

gccccaggga ctgctatggc ttcctttgtt gttcaccocg gtctgcgtca 50

tggttaaactc caatgtcctc ctgtgggttaa ctgctcttgc catcaagttc 100

accctcattg acagccaagc acagtatcca gttgtcaaca caaattatgg 150

caaaatcccg ggcctaagaa caccgttacc caatgagatc ttgggtccag 200

tggagcagta cttaggggtc ccctatgcct cccccccac tggagagagg 250

cggtttcagc cccagaacc cccgtcctcc tggactggca tccgaaatac 300

tactcagttt gctgctgtgt gccccagca cctggatgag agatccttac 350

tgcatgacat gctgcccac tggtttaccg ccaatttgga tactttgatg 400

acctatgttc aagatcaaaa tgaagactgc ctttacttaa acatctacgt 450

gcccacggaa gatggagcca acacaaagaa aaacgcagat gatataacga 500

gtaatgaccg tgggtgaagac gaagatattc atgatcagaa cagtaagaag 550

cccgatcatg tctatatcca tgggggatct tacatggagg gcaccggcaa 600

catgattgac ggcagcattt tggcaagcta cggaaacgtc atcgtgatca 650



ccattaacta ccgtctggga atactagggt ttttaagtag cggtgaccag 700  
 gcagcaaaag gcaactatgg gctcctggat cagattcaag cactgcggtg 750  
 gattgaggag aatgtgggag cctttggcgg ggaccccaag agagtgacca 800  
 tctttggctc gggggctggg gcctcctgtg tcagcctgtt gaccctgtcc 850  
 cactactcag aaggtctctt ccagaaggcc atcattcaga gcggcaccgc 900  
 cctgtccagc tgggcagtga actaccagcc ggccaagtag actcggatat 950  
 tggcagacaa ggtcggctgc aacatgctgg acaccacgga catggtagaa 1000  
 tgctgcgga acaagaacta caaggagctc atccagcaga ccatcaccac 1050  
 ggccacctac cacatagcct tcgggcccgt gatcgacggc gacgtcatcc 1100  
 cagacgaccc ccagatcctg atggagcaag gcgagttcct caactacgac 1150  
 atcatgctgg gcgtcaacca aggggaaggc ctgaagttcg tggacggcat 1200  
 cgtggataac gaggacggtg tgacgccccaa cgactttgac ttctccgtgt 1250  
 ccaacttcgt ggacaacctt tacggctacc ctgaaggga agacactttg 1300  
 cgggagacta tcaagttcat gtacacagac tgggcccata aggaaaaccc 1350  
 ggagacgcgg cggaaaaccc tgggtgctct ctttactgac caccagtggg 1400  
 tggccccgc cgtggccgc gacctgcacg cgcagtagcg cccccacc 1450  
 tacttctatg ctttctatca tcaactgcaa agcgaaatga agcccagctg 1500  
 ggagattcg gcccatggtg atgaggtccc ctatgtcttc ggcacccca 1550  
 tgatcggctc caccgagctc ttcagttgta acttttccaa gaacgacgtc 1600  
 atgctcagcg ccgtggtcat gacctactgg acgaacttcg caaaactgg 1650  
 tgatccaaat caaccagttc ctcaggatac caagttcatt cacacaaaac 1700  
 ccaaccgctt tgaagaagtg gcctggtcca agtataatcc caaagaccag 1750  
 ctctatctgc atattggctt gaaaccacaga gtgagagatc actaccgggc 1800  
 aacgaaagtg gctttctggt tggaactcgt tcctcatttg cacaacttga 1850  
 acgagatatt ccagtatggt tcaacaacca caaaggttcc tccaccagac 1900  
 atgacatcat ttccctatgg caccggcgga tctcccgcca agatatggcc 1950  
 aaccacaaa cgcccagcaa tcaactcctgc caacaatccc aaactctta 2000  
 aggacctca caaaacaggg cctgaggaca caactgtcct cattgaaacc 2050  
 aaacgagatt attccaccga attaagtgtc accattgccg tcggggcgctc 2100

gctcctcttc ctcaacatct tagcttttgc ggcgctgtac tacaaaaagg 2150  
acaagaggcg ccatgagact cacaggcgcc ccagtcccca gagaaacacc 2200  
acaaatgata tcgctcacat ccagaacgaa gagatcatgt ctctgcagat 2250  
gaagcagctg gaacacgatc acgagtgtga gtcgctgcag gcacacgaca 2300  
cactgaggct cacctgcccc ccagactaca ccctcacgct gcgccggtcg 2350  
ccagatgaca tcccacttat gacgccaaac accatcacca tgattccaaa 2400  
cacactgacg gggatgcagc ctttgcacac ttttaacacc ttcagtggag 2450  
gacaaaacag tacaaattta cccaacggac attccaccac tagagtatag 2500  
ctttgcccta tttcccttcc tatccctctg ccctaccgc tcagcaacat 2550  
agaagaggga aggaaagaga gaaggaaaga gagagagaaa gaaagtctcc 2600  
agaccaggaa tgtttttgtc ccactgactt aagacaaaaa tgcaaaaagg 2650  
cagtcattccc atcccggcag acccttatcg ttggtgtttt ccagtattac 2700  
aagatcaact tctgaccctg tgaaatgtga gaagtacaca tttctgttaa 2750  
aataactgct ttaagatctc taccactcca atcaatgttt agtgtgatag 2800  
gacatcacca tttcaaggcc ccgggtgttt ccaacgtcat ggaagcagct 2850  
gacacttctg aaactcagcc aaggacactt gatatttttt aattacaatg 2900  
gaagttaaaa catttctttc tgtgccacac aatggatggc tctccttaag 2950  
tgaagaaaga gtcaatgaga ttttgcccag cacatggagc tgtaatccag 3000  
agagaaggaa acgtagaaat ttattattaa aagaatggac tgtgcagcga 3050  
aatctgtacg gttctgtgca aagaggtggt ttgccagcct gaactatatt 3100  
taagagactt tgt 3113

<210> 375

<211> 816

<212> PRT

<213> Homo sapiens

<400> 375

Met	Leu	Asn	Ser	Asn	Val	Leu	Leu	Trp	Leu	Thr	Ala	Leu	Ala	Ile
1				5				10						15

Lys	Phe	Thr	Leu	Ile	Asp	Ser	Gln	Ala	Gln	Tyr	Pro	Val	Val	Asn
				20				25						30

Thr	Asn	Tyr	Gly	Lys	Ile	Arg	Gly	Leu	Arg	Thr	Pro	Leu	Pro	Asn
				35				40						45

Glu	Ile	Leu	Gly	Pro	Val	Glu	Gln	Tyr	Leu	Gly	Val	Pro	Tyr	Ala
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

	50	55	60
Ser Pro Pro Thr Gly Glu Arg Arg Phe Gln Pro Pro Glu Pro Pro	65	70	75
Ser Ser Trp Thr Gly Ile Arg Asn Thr Thr Gln Phe Ala Ala Val	80	85	90
Cys Pro Gln His Leu Asp Glu Arg Ser Leu Leu His Asp Met Leu	95	100	105
Pro Ile Trp Phe Thr Ala Asn Leu Asp Thr Leu Met Thr Tyr Val	110	115	120
Gln Asp Gln Asn Glu Asp Cys Leu Tyr Leu Asn Ile Tyr Val Pro	125	130	135
Thr Glu Asp Gly Ala Asn Thr Lys Lys Asn Ala Asp Asp Ile Thr	140	145	150
Ser Asn Asp Arg Gly Glu Asp Glu Asp Ile His Asp Gln Asn Ser	155	160	165
Lys Lys Pro Val Met Val Tyr Ile His Gly Gly Ser Tyr Met Glu	170	175	180
Gly Thr Gly Asn Met Ile Asp Gly Ser Ile Leu Ala Ser Tyr Gly	185	190	195
Asn Val Ile Val Ile Thr Ile Asn Tyr Arg Leu Gly Ile Leu Gly	200	205	210
Phe Leu Ser Thr Gly Asp Gln Ala Ala Lys Gly Asn Tyr Gly Leu	215	220	225
Leu Asp Gln Ile Gln Ala Leu Arg Trp Ile Glu Glu Asn Val Gly	230	235	240
Ala Phe Gly Gly Asp Pro Lys Arg Val Thr Ile Phe Gly Ser Gly	245	250	255
Ala Gly Ala Ser Cys Val Ser Leu Leu Thr Leu Ser His Tyr Ser	260	265	270
Glu Gly Leu Phe Gln Lys Ala Ile Ile Gln Ser Gly Thr Ala Leu	275	280	285
Ser Ser Trp Ala Val Asn Tyr Gln Pro Ala Lys Tyr Thr Arg Ile	290	295	300
Leu Ala Asp Lys Val Gly Cys Asn Met Leu Asp Thr Thr Asp Met	305	310	315
Val Glu Cys Leu Arg Asn Lys Asn Tyr Lys Glu Leu Ile Gln Gln	320	325	330
Thr Ile Thr Pro Ala Thr Tyr His Ile Ala Phe Gly Pro Val Ile	335	340	345

Asp Gly Asp Val	Ile Pro Asp Asp Pro	Gln Ile Leu Met Glu Gln	350	355	360
Gly Glu Phe Leu	Asn Tyr Asp Ile Met	Leu Gly Val Asn Gln Gly	365	370	375
Glu Gly Leu Lys	Phe Val Asp Gly Ile	Val Asp Asn Glu Asp Gly	380	385	390
Val Thr Pro Asn	Asp Phe Asp Phe Ser	Val Ser Asn Phe Val Asp	395	400	405
Asn Leu Tyr Gly	Tyr Pro Glu Gly Lys	Asp Thr Leu Arg Glu Thr	410	415	420
Ile Lys Phe Met	Tyr Thr Asp Trp Ala	Asp Lys Glu Asn Pro Glu	425	430	435
Thr Arg Arg Lys	Thr Leu Val Ala Leu	Phe Thr Asp His Gln Trp	440	445	450
Val Ala Pro Ala	Val Ala Ala Asp Leu	His Ala Gln Tyr Gly Ser	455	460	465
Pro Thr Tyr Phe	Tyr Ala Phe Tyr His	His Cys Gln Ser Glu Met	470	475	480
Lys Pro Ser Trp	Ala Asp Ser Ala His	Gly Asp Glu Val Pro Tyr	485	490	495
Val Phe Gly Ile	Pro Met Ile Gly Pro	Thr Glu Leu Phe Ser Cys	500	505	510
Asn Phe Ser Lys	Asn Asp Val Met Leu	Ser Ala Val Val Met Thr	515	520	525
Tyr Trp Thr Asn	Phe Ala Lys Thr Gly	Asp Pro Asn Gln Pro Val	530	535	540
Pro Gln Asp Thr	Lys Phe Ile His Thr	Lys Pro Asn Arg Phe Glu	545	550	555
Glu Val Ala Trp	Ser Lys Tyr Asn Pro	Lys Asp Gln Leu Tyr Leu	560	565	570
His Ile Gly Leu	Lys Pro Arg Val Arg	Asp His Tyr Arg Ala Thr	575	580	585
Lys Val Ala Phe	Trp Leu Glu Leu Val	Pro His Leu His Asn Leu	590	595	600
Asn Glu Ile Phe	Gln Tyr Val Ser Thr	Thr Thr Lys Val Pro Pro	605	610	615
Pro Asp Met Thr	Ser Phe Pro Tyr Gly	Thr Arg Arg Ser Pro Ala	620	625	630
Lys Ile Trp Pro	Thr Thr Lys Arg Pro	Ala Ile Thr Pro Ala Asn			

635										640					645				
Asn	Pro	Lys	His	Ser	Lys	Asp	Pro	His	Lys	Thr	Gly	Pro	Glu	Asp					
				650					655					660					
Thr	Thr	Val	Leu	Ile	Glu	Thr	Lys	Arg	Asp	Tyr	Ser	Thr	Glu	Leu					
				665					670					675					
Ser	Val	Thr	Ile	Ala	Val	Gly	Ala	Ser	Leu	Leu	Phe	Leu	Asn	Ile					
				680					685					690					
Leu	Ala	Phe	Ala	Ala	Leu	Tyr	Tyr	Lys	Lys	Asp	Lys	Arg	Arg	His					
				695					700					705					
Glu	Thr	His	Arg	Arg	Pro	Ser	Pro	Gln	Arg	Asn	Thr	Thr	Asn	Asp					
				710					715					720					
Ile	Ala	His	Ile	Gln	Asn	Glu	Glu	Ile	Met	Ser	Leu	Gln	Met	Lys					
				725					730					735					
Gln	Leu	Glu	His	Asp	His	Glu	Cys	Glu	Ser	Leu	Gln	Ala	His	Asp					
				740					745					750					
Thr	Leu	Arg	Leu	Thr	Cys	Pro	Pro	Asp	Tyr	Thr	Leu	Thr	Leu	Arg					
				755					760					765					
Arg	Ser	Pro	Asp	Asp	Ile	Pro	Leu	Met	Thr	Pro	Asn	Thr	Ile	Thr					
				770					775					780					
Met	Ile	Pro	Asn	Thr	Leu	Thr	Gly	Met	Gln	Pro	Leu	His	Thr	Phe					
				785					790					795					
Asn	Thr	Phe	Ser	Gly	Gly	Gln	Asn	Ser	Thr	Asn	Leu	Pro	His	Gly					
				800					805					810					
His	Ser	Thr	Thr	Arg	Val														
				815															

<210> 376

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 376

ggcaagctac ggaaacgtca tcgtg 25

<210> 377

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 377

aacccccgag ccaaaagatg gtcac 25

<210> 378

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 378

gtaccggtga ccaggcagca aaaggcaact atgggctcct ggatcag 47

<210> 379

<211> 2461

<212> DNA

<213> Homo sapiens

<400> 379

gggaaagatg gcggcgactc tgggaccctt tgggtcgtgg cagcagtggc 50  
ggcgtatgtt gtcggctcgg gatgggtcca ggatgttact ctttcttctt 100  
ttgttggggc ctgggcaggg gccacagcaa gtcggggcgg gtcaaactgt 150  
cgagtacttg aaacgggagc actcgtctgc gaagccctac cagggtgtgg 200  
gcacaggcag ttcctcactg tggaatctga tgggcaatgc catggtgatg 250  
accaggtata tccgccttac ccagatatg caaagtaaac aggggtgcctt 300  
gtggaaccgg gtgccatgtt tcttgagaga ctgggagttg cagggtgcact 350  
tcaaaatcca tggacaagga aagaagaatc tgcatgggga tggcttggca 400  
atctggtaca caaaggatcg gatgcagcca gggcctgtgt ttggaaacat 450  
ggacaaaattt gtggggctgg gagtatttgt agacacctac cccaatgagg 500  
agaagcagca agagcgggta ttcccctaca tctcagccat ggtgaacaac 550  
ggctccctca gctatgatca tgagcgggat gggcggccta cagagctggg 600  
aggctgcaca gccattgtcc gcaatcttca ttacgacacc ttcctggtga 650  
ttcgctacgt caagaggcat ttgacgataa tgatggatat tgatggcaag 700  
catgagtggg gggactgcat tgaagtgcc ggagtccgcc tgccccgcgg 750  
ctactacttc ggcacctcct ccatcactgg ggatctctca gataatcatg 800  
atgtcatttc cttgaagttg tttgaactga cagtggagag aaccccagaa 850  
gaggaaaagc tccatcgaga tgtgttcttg ccctcagtgg acaatatgaa 900  
gctgcctgag atgacagctc cactgccgcc cctgagtggc ctggccctct 950  
tcctcatcgt ctttttctcc ctgggtgttt ctgtatttgc catagtcatt 1000

ggtatcatac tctacaacaa atggcaggaa cagagccgaa agcgcttcta 1050  
 ctgagccctc ctgctgccac cacttttgtg actgtcacc atgaggtatg 1100  
 gaaggagcag gcactggcct gagcatgcag cctggagagt gttcttgtct 1150  
 ctagcagctg gttggggact atattctgtc actggagttt tgaatgcagg 1200  
 gaccccgcat tcccatgggt gtgcatgggg acatctaact ctgggtctggg 1250  
 aagccaccca cccagggca atgctgctgt gatgtgcctt tccctgcagt 1300  
 ccttccatgt gggagcagag gtgtgaagag aatttacgtg gttgtgatgc 1350  
 caaaatcaca gaacagaatt tcatagocca ggctgccgtg ttgtttgact 1400  
 cagaaggccc ttctacttca gttttgaatc cacaagaat taaaaactgg 1450  
 taacaccaca ggctttctga ccatccattc gttgggtttt gcatttgacc 1500  
 caaccctctg cctacctgag gagctttctt tggaaaccag gatggaaact 1550  
 tcttccctgc cttaccttcc ttctactoca ttcatgtcc tctctgtgtg 1600  
 caacctgagc tgggaaaggc atttgatgc ctctctgttg gggcctgggg 1650  
 ctgcagaaca cacctgcgtt tctactggcct tcattaggtg gccctaggga 1700  
 gatggcttct tgctttggat cactgttccc tagcatgggt cttgggtcta 1750  
 ttggcatgtc catggccttc ccaatcaagt ctcttcaggc cctcagtga 1800  
 gtttggctaa aggttgggtg aaaaatcaag agaagcctgg aagacatcat 1850  
 ggatgcatg gattagctgt gcaactgacc agctccagg ttagatcaa 1900  
 caaaagcaac atttgtcatg tggctgacc atgtggagat gtttctggac 1950  
 ttgctagagc ctgcttagct gcatgttttg tagttacgat ttttggaatc 2000  
 ccactttgag tgctgaaagt gtaaggaagc tttcttotta caccttgggc 2050  
 ttggatattg cccagagaag aaatttggct tttttttct taatggacaa 2100  
 gagacagttg ctgttctcat gttccaagtc tgagagcaac agaccctcat 2150  
 catctgtgcc tggaagagtt cactgtcatt gagcagcaca gcctgagtgc 2200  
 tggcctctgt caacccttat tccactgcct tatttgacaa ggggttacat 2250  
 gctgctcacc ttactgccct gggattaaat cagttacagg ccagagtctc 2300  
 cttggagggc ctggaactct gagtcctcct atgaacctct gtagcctaaa 2350  
 tgaaattctt aaaatcaccg atggaaccaa aaaaaaaaaa aaaaagggcg 2400  
 gccgcgactc tagagtcgac ctgcagtagg gataacagg taataagctt 2450

ggccgccatg g 2461

<210> 380

<211> 348

<212> PRT

<213> Homo sapiens

<400> 380

Met	Ala	Ala	Thr	Leu	Gly	Pro	Leu	Gly	Ser	Trp	Gln	Gln	Trp	Arg
1				5					10					15

Arg	Cys	Leu	Ser	Ala	Arg	Asp	Gly	Ser	Arg	Met	Leu	Leu	Leu	Leu
				20					25					30

Leu	Leu	Leu	Gly	Ser	Gly	Gln	Gly	Pro	Gln	Gln	Val	Gly	Ala	Gly
				35					40					45

Gln	Thr	Phe	Glu	Tyr	Leu	Lys	Arg	Glu	His	Ser	Leu	Ser	Lys	Pro
				50					55					60

Tyr	Gln	Gly	Val	Gly	Thr	Gly	Ser	Ser	Ser	Leu	Trp	Asn	Leu	Met
				65					70					75

Gly	Asn	Ala	Met	Val	Met	Thr	Gln	Tyr	Ile	Arg	Leu	Thr	Pro	Asp
				80					85					90

Met	Gln	Ser	Lys	Gln	Gly	Ala	Leu	Trp	Asn	Arg	Val	Pro	Cys	Phe
				95					100					105

Leu	Arg	Asp	Trp	Glu	Leu	Gln	Val	His	Phe	Lys	Ile	His	Gly	Gln
				110					115					120

Gly	Lys	Lys	Asn	Leu	His	Gly	Asp	Gly	Leu	Ala	Ile	Trp	Tyr	Thr
				125					130					135

Lys	Asp	Arg	Met	Gln	Pro	Gly	Pro	Val	Phe	Gly	Asn	Met	Asp	Lys
				140					145					150

Phe	Val	Gly	Leu	Gly	Val	Phe	Val	Asp	Thr	Tyr	Pro	Asn	Glu	Glu
				155					160					165

Lys	Gln	Gln	Glu	Arg	Val	Phe	Pro	Tyr	Ile	Ser	Ala	Met	Val	Asn
				170					175					180

Asn	Gly	Ser	Leu	Ser	Tyr	Asp	His	Glu	Arg	Asp	Gly	Arg	Pro	Thr
				185					190					195

Glu	Leu	Gly	Gly	Cys	Thr	Ala	Ile	Val	Arg	Asn	Leu	His	Tyr	Asp
				200					205					210

Thr	Phe	Leu	Val	Ile	Arg	Tyr	Val	Lys	Arg	His	Leu	Thr	Ile	Met
				215					220					225

Met	Asp	Ile	Asp	Gly	Lys	His	Glu	Trp	Arg	Asp	Cys	Ile	Glu	Val
				230					235					240

Pro	Gly	Val	Arg	Leu	Pro	Arg	Gly	Tyr	Tyr	Phe	Gly	Thr	Ser	Ser
				245					250					255



Ile Thr Gly Asp	Leu Ser Asp Asn His Asp Val Ile Ser Leu Lys	
	260	270
Leu Phe Glu Leu Thr Val Glu Arg Thr Pro Glu Glu Glu Lys Leu		
	275	285
His Arg Asp Val Phe Leu Pro Ser Val Asp Asn Met Lys Leu Pro		
	290	300
Glu Met Thr Ala Pro Leu Pro Pro Leu Ser Gly Leu Ala Leu Phe		
	305	315
Leu Ile Val Phe Phe Ser Leu Val Phe Ser Val Phe Ala Ile Val		
	320	330
Ile Gly Ile Ile Leu Tyr Asn Lys Trp Gln Glu Gln Ser Arg Lys		
	335	345

Arg Phe Tyr

<210> 381  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 381  
 ccttgggtcg tggcagcagt gg 22

<210> 382  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 382  
 cactctccag gctgcatgct cagg 24

<210> 383  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 383  
 gtcaaacgtt cgagtacttg aaacgggagc actcgctgtc gaagc 45

<210> 384  
 <211> 3150  
 <212> DNA  
 <213> Homo sapiens

<400> 384

ccgagccggg cgcgcagcga cggagctggg gccggcctgg gaccatgggc 50  
gtgagtgcaa tctacggatc agtctctgat ggtgggtcgt taacctcagt 100  
ggggactcca agatttccat gaagaaaatc agttgtcttc attcaagaat 150  
tggggtctgg ctcaagaatc ctgcagctgg tgaaaatctg ttttctagaa 200  
gaggtttaat taatgcctgc agtctgacat gttcccgatt tgaggtgaaa 250  
ccatgaagag aaaatagaat acttaataat gcttttccgc aaccgcttct 300  
tgctgctgct ggccctggct gcgctgctgg cctttgtgag cctcagcctg 350  
cagttcttcc acctgatccc ggtgtcgact cctaagaatg gaatgagtag 400  
caagagtcca aagagaatca tgcccgacct tgtgacggag cccctgtga 450  
cagaccccg tttatgaagc cttttgtact gcaacatccc cagtgtggcc 500  
gagcgcagca tggaaggtca tgccccgcac cattttaagc tgggtctcagt 550  
gcatgtgttc attogccacg gagacaggta cccactgtat gtcattccca 600  
aaacaaagcg accagaaatt gactgcactc tgggtggctaa caggaaaccg 650  
tatcacccaa aactggaagc tttcattagt cacatgtcaa aaggatccgg 700  
agcctctttc gaaagcccct tgaactcctt gcctctttac ccaaaccacc 750  
cattgtgtga gatgggagag ctacacacaga caggagtgtg gcagcatttg 800  
cagaacggtc agctgctgag ggatatctat ctaaagaaac acaaactcct 850  
gccaatgat tgggtctgcag accagctcta tttagagacc actgggaaaa 900  
gcgggaccct acaaagtggg ctggccttgc tttatggctt tctcccagat 950  
tttgactgga agaagattta tttcaggcac cagccaagtg cgctgttctg 1000  
ctctggaagc tgctattgcc cggtaagaaa ccagtatctg gaaaaggagc 1050  
agcgtcgtca gtacctcta cgtttgaaaa acagccagct ggagaagacc 1100  
tacggggaga tggccaagat cgtggatgtc cccaccaagc agcttagagc 1150  
tgccaacccc atagactcca tgctctgcca cttctgccac aatgtcagct 1200  
ttccctgtac cagaaatggc tgtgttgaca tggagcactt caaggtatt 1250  
aagacccatc agatcgagga tgaaagggaa agacgggaga agaaattgta 1300  
cttcgggtat tctctcctgg gtgccacccc catcctgaac caaacatcg 1350  
gccgatgca gcgtgccacc gagggcagga aagaagagct ctttgccctc 1400  
tactctgctc atgatgtcac tctgtcacca gttctcagt ccttgggcct 1450

ttcagaagcc aggttcccaa ggtttgcagc caggttgatc tttgagcttt 1500  
 ggcaagacag agaaaagccc agtgaacatt ccgtccggat tctttacaat 1550  
 ggcgtcgatg tcacattcca cacctctttc tgccaagacc accacaagcg 1600  
 ttctcccaag cccatgtgcc cgcttgaaaa cttggtccgc tttgtgaaaa 1650  
 gggacatggt tgtagccctg ggtggcagtg gtacaaatta ttatgatgca 1700  
 tgtcacaggg aaggattcta aaaggatgc agtacagcag tatagaatcc 1750  
 atgccaatac agagcatagg gaaagggtcca cttctagttt tgtctgttac 1800  
 taagggtaga agattattgc tttttaaagg ctaaattattg tttgtgggaa 1850  
 ccacagatgg ttgggggtga acagtaagca cattgctgca atgtggtacg 1900  
 tgaattgctt ggtacaaaat ggccagttca cagaggaata gaaggactt 1950  
 tatcatagcc agacttcgct tagaatgcca gaataatata gttcaagacc 2000  
 tgaagttgcc aatccaagtt tgcactcttc tggcctgccc catgttacta 2050  
 tgtgatggaa ccagcacacc tcaacaaaaa tttttttaat cttagacatt 2100  
 tttaccttgt ccttggttaag aatttcttga agtgatttat ctaaaataaa 2150  
 ggttggcaaa ctttttctgt aaagggccag attgtaaata tttcagactg 2200  
 tgtggacca aaggccacat acagtctctg tcataactac tcaactctgt 2250  
 ttctgaagca ggaaagccac cacagacagt acataaagga atatgtgtag 2300  
 ctgggttccc aggccagaca aaacagatgg tgaccagact tggcccctgg 2350  
 gctgtagttt gctgaccct catctaaaaa ataggctata ctacaattgc 2400  
 acttcagca ctttgagaac gagttgaata ccaagaatta ttcaatggtt 2450  
 cctccagtaa cttctgctag aaacacagaa tttggtctgt atctgacact 2500  
 agaacaaaac ttgagggtaa ataaacattg aattagaatg aatcatagaa 2550  
 aactgattag aagaatactt gatgtttatg atgattgtgg tacaagatag 2600  
 ttttaagtat gttctaaata tttgtctgct gtagtctatt tgctgtatat 2650  
 gctgaaattt ttgtatgcca tttagtattt ttatagttaa ggaaaatatt 2700  
 ttctaagacc agtttttagat gactcttatt cctgtagtaa tattcaattt 2750  
 gctgtacctg cttggtggtt agaaggaggc tagaagatga attcaggcac 2800  
 tttcttccaa taaaactaat tatggctcat tccctttgac aagctgtaga 2850  
 actggattca tttttaaacc attttcatca gtttcaaag gtaaattctg 2900

attgattttt aaatgcgttt ttggaagaac tttgctatta ggtagtttac 2950  
 agatctttat aagggtgtttt atatattaga agcaattata attaccatctg 3000  
 tgattttctga actaatggtg ctaattcaga gaaatggaaa gtgaaagtga 3050  
 gattctctgt tgtcatcggc attccaactt tttctctttg tttttgtcca 3100  
 gtgttgcatt tgaatatgtc tgtttctata aataaatttt ttaagaataa 3150

<210> 385

<211> 480

<212> PRT

<213> Homo sapiens

<400> 385

Met	Leu	Phe	Arg	Asn	Arg	Phe	Leu	Leu	Leu	Leu	Ala	Leu	Ala	Ala	1	5	10	15
Leu	Leu	Ala	Phe	Val	Ser	Leu	Ser	Leu	Gln	Phe	Phe	His	Leu	Ile	20	25	30	
Pro	Val	Ser	Thr	Pro	Lys	Asn	Gly	Met	Ser	Ser	Lys	Ser	Arg	Lys	35	40	45	
Arg	Ile	Met	Pro	Asp	Pro	Val	Thr	Glu	Pro	Pro	Val	Thr	Asp	Pro	50	55	60	
Val	Tyr	Glu	Ala	Leu	Leu	Tyr	Cys	Asn	Ile	Pro	Ser	Val	Ala	Glu	65	70	75	
Arg	Ser	Met	Glu	Gly	His	Ala	Pro	His	His	Phe	Lys	Leu	Val	Ser	80	85	90	
Val	His	Val	Phe	Ile	Arg	His	Gly	Asp	Arg	Tyr	Pro	Leu	Tyr	Val	95	100	105	
Ile	Pro	Lys	Thr	Lys	Arg	Pro	Glu	Ile	Asp	Cys	Thr	Leu	Val	Ala	110	115	120	
Asn	Arg	Lys	Pro	Tyr	His	Pro	Lys	Leu	Glu	Ala	Phe	Ile	Ser	His	125	130	135	
Met	Ser	Lys	Gly	Ser	Gly	Ala	Ser	Phe	Glu	Ser	Pro	Leu	Asn	Ser	140	145	150	
Leu	Pro	Leu	Tyr	Pro	Asn	His	Pro	Leu	Cys	Glu	Met	Gly	Glu	Leu	155	160	165	
Thr	Gln	Thr	Gly	Val	Val	Gln	His	Leu	Gln	Asn	Gly	Gln	Leu	Leu	170	175	180	
Arg	Asp	Ile	Tyr	Leu	Lys	Lys	His	Lys	Leu	Leu	Pro	Asn	Asp	Trp	185	190	195	
Ser	Ala	Asp	Gln	Leu	Tyr	Leu	Glu	Thr	Thr	Gly	Lys	Ser	Arg	Thr	200	205	210	

Leu	Gln	Ser	Gly	Leu	Ala	Leu	Leu	Tyr	Gly	Phe	Leu	Pro	Asp	Phe	215	220	225
Asp	Trp	Lys	Lys	Ile	Tyr	Phe	Arg	His	Gln	Pro	Ser	Ala	Leu	Phe	230	235	240
Cys	Ser	Gly	Ser	Cys	Tyr	Cys	Pro	Val	Arg	Asn	Gln	Tyr	Leu	Glu	245	250	255
Lys	Glu	Gln	Arg	Arg	Gln	Tyr	Leu	Leu	Arg	Leu	Lys	Asn	Ser	Gln	260	265	270
Leu	Glu	Lys	Thr	Tyr	Gly	Glu	Met	Ala	Lys	Ile	Val	Asp	Val	Pro	275	280	285
Thr	Lys	Gln	Leu	Arg	Ala	Ala	Asn	Pro	Ile	Asp	Ser	Met	Leu	Cys	290	295	300
His	Phe	Cys	His	Asn	Val	Ser	Phe	Pro	Cys	Thr	Arg	Asn	Gly	Cys	305	310	315
Val	Asp	Met	Glu	His	Phe	Lys	Val	Ile	Lys	Thr	His	Gln	Ile	Glu	320	325	330
Asp	Glu	Arg	Glu	Arg	Arg	Glu	Lys	Lys	Leu	Tyr	Phe	Gly	Tyr	Ser	335	340	345
Leu	Leu	Gly	Ala	His	Pro	Ile	Leu	Asn	Gln	Thr	Ile	Gly	Arg	Met	350	355	360
Gln	Arg	Ala	Thr	Glu	Gly	Arg	Lys	Glu	Glu	Leu	Phe	Ala	Leu	Tyr	365	370	375
Ser	Ala	His	Asp	Val	Thr	Leu	Ser	Pro	Val	Leu	Ser	Ala	Leu	Gly	380	385	390
Leu	Ser	Glu	Ala	Arg	Phe	Pro	Arg	Phe	Ala	Ala	Arg	Leu	Ile	Phe	395	400	405
Glu	Leu	Trp	Gln	Asp	Arg	Glu	Lys	Pro	Ser	Glu	His	Ser	Val	Arg	410	415	420
Ile	Leu	Tyr	Asn	Gly	Val	Asp	Val	Thr	Phe	His	Thr	Ser	Phe	Cys	425	430	435
Gln	Asp	His	His	Lys	Arg	Ser	Pro	Lys	Pro	Met	Cys	Pro	Leu	Glu	440	445	450
Asn	Leu	Val	Arg	Phe	Val	Lys	Arg	Asp	Met	Phe	Val	Ala	Leu	Gly	455	460	465
Gly	Ser	Gly	Thr	Asn	Tyr	Tyr	Asp	Ala	Cys	His	Arg	Glu	Gly	Phe	470	475	480

<210> 386

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 386  
ccaagcagct tagagctcca gacc 24

<210> 387  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 387  
ttccctatgc tctgtattgg catgg 25

<210> 388  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 388  
gccacttctg ccacaatgtc agctttccct gtaccagaaa tggctgtgtt 50

<210> 389  
<211> 3313  
<212> DNA  
<213> Homo sapiens

<400> 389  
aaaaaagctc actaaagttt ctattagagc gaatacggta gatttccatc 50  
cccttttgaa gaacagtact gtggagctat ttaagagata aaaacgaaat 100  
atcctttctg ggagttcaag attgtgcagt aattggttag gactctgagc 150  
gccgctgttc accaatcggg gagagaaaag cggagatcct gctcgccttg 200  
cacgcgcctg aagcacaaag cagatagcta ggaatgaacc atccctggga 250  
gtatgtggaa acaacggagg agctctgact tcccaactgt cccattctat 300  
gggcgaagga actgctcctg acttcagtgg ttaagggcag aattgaaaat 350  
aattctggag gaagataaga atgattcctg cgcgactgca ccgggactac 400  
aaagggcttg tcctgctggg aatcctcctg gggactctgt ggagaccgg 450  
atgcacccag atacgctatt cagttccgga agagctggag aaaggctcta 500  
gggtgggcga catctccagg gacctggggc tggagccccg ggagctcgcg 550  
gagcgcggag tccgcatcat cccagaggtt aggacgcagc ttttcgccct 600

gaatccgcgc agcggcagct tggtcacggc gggcaggata gaccgggagg 650  
 agctctgtat gggggccatc aagtgtcaat taaatctaga cattctgatg 700  
 gaggataaag tgaaaatata tggagtagaa gtagaagtaa gggacattaa 750  
 cgacaatgcg ccttactttc gtgaaagtga attagaaata aaaattagtg 800  
 aaaatgcagc cactgagatg cggttccctc taccacacgc ctgggatccg 850  
 gatatacgga agaactctct gcagagctac gagctcagcc cgaacactca 900  
 cttctccctc atcgtgcaaa atggagccga cggtagtaag taccgccaat 950  
 tgggtgctgaa acgcgccttg gaccgcgaag aaaaggctgc tcaccacctg 1000  
 gtccctacgg cctccgacgg gggcgacccg gtgcgcacag gcaccgcgcg 1050  
 catccgctg atggttcttg atgcgaacga caacgcacca gcgtttgctc 1100  
 agcccgagta ccgcgcgagc gttccggaga atctggcctt gggcacgcag 1150  
 ctgctttag tcaacgctac cgaccctgac gaaggagtca atgcggaagt 1200  
 gaggtattcc ttccggtatg tggacgacaa ggccggccaa gttttcaaac 1250  
 tagattgtaa ttcagggaca atatcaaaa taggggagtt ggaccacgag 1300  
 gagtcaggat tctaccagat ggaagtgcaa gcaatggata atgcaggata 1350  
 ttctgcgcga gccaaagtcc tgatcactgt tctggacgtg aacgacaatg 1400  
 ccccgagaagt ggtccctacc tctctcgcca gctcggttcc cgaaaactct 1450  
 ccagaggga cattaattgc ctttttaaat gtaaatgacc aagattctga 1500  
 ggaaaacgga caggatgatc gtttcatcca aggaaatctg ccctttaaat 1550  
 tagaaaaatc ttacggaaat tactatagtt tagtcacaga catagtcttg 1600  
 gatagggaac aggttccctg ctacaacatc acagtgaccg ccaactgaccg 1650  
 gggaaacccg cccctatcca cggaaactca tatctcgctg aacgtggcag 1700  
 acaccaacga caaccgcgcg gtcttccctc aggcctccta ttccgcttat 1750  
 atcccagaga acaatcccag aggagtttcc ctctgtctctg tgaccgcca 1800  
 cgaccccgac tgtgaagaga acgccagat cacttattcc ctggctgaga 1850  
 acaccatcca aggggcaagc ctatcgtcct acgtgtccat caactccgac 1900  
 actggggtac tgtatgcgct gagctccttc gactacgagc agttccgaga 1950  
 cttgcaagtg aaagtgatgg cgcgggacaa cgggcacccg cccctcagca 2000  
 gcaacgtgtc gttgagcctg ttcgtgctgg accagaacga caatgcgccc 2050

gagatcctgt accccgccct cccacaggac ggttccactg gcgtggagct 2100  
ggctccccgc tccgcagagc ccggctacct ggtgaccaag gtggtggcgg 2150  
tggacagaga ctccggccag aacgcctggc tgtcctaccg tctgctcaag 2200  
gccagcgagc cgggactctt ctcggtgggt ctgcacacgg gcgaggtgcg 2250  
cacggcgcgga gccctgctgg acagagacgc gctcaagcag agcctcgtag 2300  
tggccgtcca ggaccacggc cagccccctc tctccgccac tgtcacgctc 2350  
accgtggccg tggccgacag catcccccaa gtcttgccgg acctcggcag 2400  
cctcgagtct ccagctaact ctgaaacctc agacctcact ctgtacctgg 2450  
tggtagcggg ggcccgggtc tctgctgtct tcttggcctt cgtcatcttg 2500  
ctgctggcgc tcaggctgcg gcgctggcac aagtcacgcc tgctgcaggc 2550  
ttcaggaggc ggcttgacag gagcgccggc gtcgcacttt gtgggctggg 2600  
acggggtgca ggctttctct cagacctatt cccacgaggt ttccctcacc 2650  
acggactcgc ggaagagtca cctgatcttc cccagccca actatgcaga 2700  
catgctcgtc agccaggaga gctttgaaaa aagcgagccc cttttgctgt 2750  
caggtgattc ggtattttct aaagacagtc atgggttaat tgaggtgagt 2800  
ttatatcaaa ttttctttct tttttttttt aattgctctg tctcccaagc 2850  
tggagtgcag cggtaacgat atagctcact gcggcctcaa actcctaggc 2900  
tcaagcaatt atcccacott tgctccgggt gtaacaggga ctacaggtgc 2950  
aagccaccta ctgtctgcct atctatctat ctatctatct atctatctat 3000  
ctatctatct atctatctat tactttcttg tacagacggg agtctcacgc 3050  
ctgtaatccc agtacttttg gagggccgagg cgggtggatc acctgagggt 3100  
gggagtttga gaccagcctg accaacaatgg agaaaccccg tctatactaa 3150  
aaaaatacaa aattagccgg gcgtggtggt gcatgtctgt aatcccagct 3200  
acttgggagg ctgagtcagg agaattgctt taacctggga ggtggagggt 3250  
gcaatgagct gagattgtgc cattgcactc cagcctgggc aacaagagt 3300  
aaactctatc tca 3313

<210> 390

<211> 916

<212> PRT

<213> Homo sapiens

<400> 390



Met	Ile	Pro	Ala	Arg	Leu	His	Arg	Asp	Tyr	Lys	Gly	Leu	Val	Leu	1	5	10	15
Leu	Gly	Ile	Leu	Leu	Gly	Thr	Leu	Trp	Glu	Thr	Gly	Cys	Thr	Gln	20	25	30	
Ile	Arg	Tyr	Ser	Val	Pro	Glu	Glu	Leu	Glu	Lys	Gly	Ser	Arg	Val	35	40	45	
Gly	Asp	Ile	Ser	Arg	Asp	Leu	Gly	Leu	Glu	Pro	Arg	Glu	Leu	Ala	50	55	60	
Glu	Arg	Gly	Val	Arg	Ile	Ile	Pro	Arg	Gly	Arg	Thr	Gln	Leu	Phe	65	70	75	
Ala	Leu	Asn	Pro	Arg	Ser	Gly	Ser	Leu	Val	Thr	Ala	Gly	Arg	Ile	80	85	90	
Asp	Arg	Glu	Glu	Leu	Cys	Met	Gly	Ala	Ile	Lys	Cys	Gln	Leu	Asn	95	100	105	
Leu	Asp	Ile	Leu	Met	Glu	Asp	Lys	Val	Lys	Ile	Tyr	Gly	Val	Glu	110	115	120	
Val	Glu	Val	Arg	Asp	Ile	Asn	Asp	Asn	Ala	Pro	Tyr	Phe	Arg	Glu	125	130	135	
Ser	Glu	Leu	Glu	Ile	Lys	Ile	Ser	Glu	Asn	Ala	Ala	Thr	Glu	Met	140	145	150	
Arg	Phe	Pro	Leu	Pro	His	Ala	Trp	Asp	Pro	Asp	Ile	Gly	Lys	Asn	155	160	165	
Ser	Leu	Gln	Ser	Tyr	Glu	Leu	Ser	Pro	Asn	Thr	His	Phe	Ser	Leu	170	175	180	
Ile	Val	Gln	Asn	Gly	Ala	Asp	Gly	Ser	Lys	Tyr	Pro	Glu	Leu	Val	185	190	195	
Leu	Lys	Arg	Ala	Leu	Asp	Arg	Glu	Glu	Lys	Ala	Ala	His	His	Leu	200	205	210	
Val	Leu	Thr	Ala	Ser	Asp	Gly	Gly	Asp	Pro	Val	Arg	Thr	Gly	Thr	215	220	225	
Ala	Arg	Ile	Arg	Val	Met	Val	Leu	Asp	Ala	Asn	Asp	Asn	Ala	Pro	230	235	240	
Ala	Phe	Ala	Gln	Pro	Glu	Tyr	Arg	Ala	Ser	Val	Pro	Glu	Asn	Leu	245	250	255	
Ala	Leu	Gly	Thr	Gln	Leu	Leu	Val	Val	Asn	Ala	Thr	Asp	Pro	Asp	260	265	270	
Glu	Gly	Val	Asn	Ala	Glu	Val	Arg	Tyr	Ser	Phe	Arg	Tyr	Val	Asp	275	280	285	
Asp	Lys	Ala	Ala	Gln	Val	Phe	Lys	Leu	Asp	Cys	Asn	Ser	Gly	Thr				

	290		295		300
Ile Ser Thr Ile	Gly Glu Leu Asp His	Glu Glu Ser Gly Phe Tyr			
	305	310			315
Gln Met Glu Val	Gln Ala Met Asp Asn	Ala Gly Tyr Ser Ala Arg			
	320	325			330
Ala Lys Val Leu	Ile Thr Val Leu Asp	Val Asn Asp Asn Ala Pro			
	335	340			345
Glu Val Val Leu	Thr Ser Leu Ala Ser	Ser Val Pro Glu Asn Ser			
	350	355			360
Pro Arg Gly Thr	Leu Ile Ala Leu Leu	Asn Val Asn Asp Gln Asp			
	365	370			375
Ser Glu Glu Asn	Gly Gln Val Ile Cys	Phe Ile Gln Gly Asn Leu			
	380	385			390
Pro Phe Lys Leu	Glu Lys Ser Tyr Gly	Asn Tyr Tyr Ser Leu Val			
	395	400			405
Thr Asp Ile Val	Leu Asp Arg Glu Gln	Val Pro Ser Tyr Asn Ile			
	410	415			420
Thr Val Thr Ala	Thr Asp Arg Gly Thr	Pro Pro Leu Ser Thr Glu			
	425	430			435
Thr His Ile Ser	Leu Asn Val Ala Asp	Thr Asn Asp Asn Pro Pro			
	440	445			450
Val Phe Pro Gln	Ala Ser Tyr Ser Ala	Tyr Ile Pro Glu Asn Asn			
	455	460			465
Pro Arg Gly Val	Ser Leu Val Ser Val	Thr Ala His Asp Pro Asp			
	470	475			480
Cys Glu Glu Asn	Ala Gln Ile Thr Tyr	Ser Leu Ala Glu Asn Thr			
	485	490			495
Ile Gln Gly Ala	Ser Leu Ser Ser Tyr	Val Ser Ile Asn Ser Asp			
	500	505			510
Thr Gly Val Leu	Tyr Ala Leu Ser Ser	Phe Asp Tyr Glu Gln Phe			
	515	520			525
Arg Asp Leu Gln	Val Lys Val Met Ala	Arg Asp Asn Gly His Pro			
	530	535			540
Pro Leu Ser Ser	Asn Val Ser Leu Ser	Leu Phe Val Leu Asp Gln			
	545	550			555
Asn Asp Asn Ala	Pro Glu Ile Leu Tyr	Pro Ala Leu Pro Thr Asp			
	560	565			570
Gly Ser Thr Gly	Val Glu Leu Ala Pro	Arg Ser Ala Glu Pro Gly			
	575	580			585

Tyr	Leu	Val	Thr	Lys	Val	Val	Ala	Val	Asp	Arg	Asp	Ser	Gly	Gln	
				590					595					600	
Asn	Ala	Trp	Leu	Ser	Tyr	Arg	Leu	Leu	Lys	Ala	Ser	Glu	Pro	Gly	
				605					610					615	
Leu	Phe	Ser	Val	Gly	Leu	His	Thr	Gly	Glu	Val	Arg	Thr	Ala	Arg	
				620					625					630	
Ala	Leu	Leu	Asp	Arg	Asp	Ala	Leu	Lys	Gln	Ser	Leu	Val	Val	Ala	
				635					640					645	
Val	Gln	Asp	His	Gly	Gln	Pro	Pro	Leu	Ser	Ala	Thr	Val	Thr	Leu	
				650					655					660	
Thr	Val	Ala	Val	Ala	Asp	Ser	Ile	Pro	Gln	Val	Leu	Ala	Asp	Leu	
				665					670					675	
Gly	Ser	Leu	Glu	Ser	Pro	Ala	Asn	Ser	Glu	Thr	Ser	Asp	Leu	Thr	
				680					685					690	
Leu	Tyr	Leu	Val	Val	Ala	Val	Ala	Ala	Val	Ser	Cys	Val	Phe	Leu	
				695					700					705	
Ala	Phe	Val	Ile	Leu	Leu	Leu	Ala	Leu	Arg	Leu	Arg	Arg	Trp	His	
				710					715					720	
Lys	Ser	Arg	Leu	Leu	Gln	Ala	Ser	Gly	Gly	Gly	Leu	Thr	Gly	Ala	
				725					730					735	
Pro	Ala	Ser	His	Phe	Val	Gly	Val	Asp	Gly	Val	Gln	Ala	Phe	Leu	
				740					745					750	
Gln	Thr	Tyr	Ser	His	Glu	Val	Ser	Leu	Thr	Thr	Asp	Ser	Arg	Lys	
				755					760					765	
Ser	His	Leu	Ile	Phe	Pro	Gln	Pro	Asn	Tyr	Ala	Asp	Met	Leu	Val	
				770					775					780	
Ser	Gln	Glu	Ser	Phe	Glu	Lys	Ser	Glu	Pro	Leu	Leu	Leu	Ser	Gly	
				785					790					795	
Asp	Ser	Val	Phe	Ser	Lys	Asp	Ser	His	Gly	Leu	Ile	Glu	Val	Ser	
				800					805					810	
Leu	Tyr	Gln	Ile	Phe	Phe	Leu	Phe	Phe	Phe	Asn	Cys	Ser	Val	Ser	
				815					820					825	
Gln	Ala	Gly	Val	Gln	Arg	Tyr	Asp	His	Ser	Ser	Leu	Arg	Pro	Gln	
				830					835					840	
Thr	Pro	Arg	Leu	Lys	Gln	Leu	Ser	His	Leu	Cys	Leu	Arg	Cys	Asn	
				845					850					855	
Arg	Asp	Tyr	Arg	Cys	Lys	Pro	Pro	Thr	Val	Cys	Leu	Ser	Ile	Tyr	
				860					865					870	
Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Ser	Ile	Tyr	Leu	Leu	Leu	

	875		880		885
Ser Cys Thr Asp Gly Ser Leu Thr Pro Val Ile Pro Val Leu Trp					
	890		895		900
Glu Ala Glu Ala Gly Gly Ser Pro Glu Val Gly Ser Leu Arg Pro					
	905		910		915

Ala

<210> 391

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 391

tccgtctctg tgaaccgccc cac 23

<210> 392

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 392

ctcgggcgca ttgtcgttct ggtc 24

<210> 393

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 393

ccgactgtga aagagaacgc cccagatcca cttgttcccc 40

<210> 394

<211> 999

<212> DNA

<213> Homo sapiens

<400> 394

cccaggctct agtgcaggag gagaaggagg aggagcagga ggtggagatt 50

cccagttaaa aggctccaga atcgtgtacc aggagagaa ctgaagtact 100

ggggcctcct ccaactgggtc cgaatcagta ggtgaccccg cccctggatt 150

ctggaagacc tcacatggg acgccccga cctcgtgcgg ccaagacgtg 200

gatgttcctg ctcttgctgg ggggagcctg ggcaggacac tccagggcac 250  
aggaggacaa ggtgctgggg ggtcatgagt gccaacccca ttcgcagcct 300  
tggcaggcgg ccttggtcca gggccagcaa ctactctgtg gcggtgtcct 350  
tgtagggtggc aactgggtcc ttacagctgc cactgtaaa aaaccgaaat 400  
acacagtacg cctgggagac cacagcctac agaataaaga tggcccagag 450  
caagaaatac ctgtggttca gtccatccca caccctgtct acaacagcag 500  
cgatgtggag gaccacaacc atgatctgat gcttcttcaa ctgcgtgacc 550  
aggcatccct ggggtccaaa gtgaagccca tcagcctggc agatcattgc 600  
accagcctg gccagaagtg caccgtctca ggctggggca ctgtcaccag 650  
tccccgagag aattttcctg acactctcaa ctgtgcagaa gtaaaaatct 700  
ttccccagaa gaagtgtgag gatgcttacc cggggcagat cacagatggc 750  
atggtctgtg caggcagcag caaaggggct gacacgtgcc agggcgattc 800  
tggaggcccc ctggtgtgtg atggtgact ccagggcata acatcctggg 850  
gctcagaccc ctgtgggagg tccgacaaac ctggcgtcta taccaacatc 900  
tgccgctacc tggactggat caagaagatc ataggcagca agggctgatt 950  
ctaggataag cactagatct cccttaataa actcacaact ctctggttc 999

<210> 395

<211> 260

<212> PRT

<213> Homo sapiens

<400> 395

Met	Gly	Arg	Pro	Arg	Pro	Arg	Ala	Ala	Lys	Thr	Trp	Met	Phe	Leu
1				5					10					15
Leu	Leu	Leu	Gly	Gly	Ala	Trp	Ala	Gly	His	Ser	Arg	Ala	Gln	Glu
			20						25					30
Asp	Lys	Val	Leu	Gly	Gly	His	Glu	Cys	Gln	Pro	His	Ser	Gln	Pro
			35						40					45
Trp	Gln	Ala	Ala	Leu	Phe	Gln	Gly	Gln	Gln	Leu	Leu	Cys	Gly	Gly
			50						55					60
Val	Leu	Val	Gly	Gly	Asn	Trp	Val	Leu	Thr	Ala	Ala	His	Cys	Lys
			65						70					75
Lys	Pro	Lys	Tyr	Thr	Val	Arg	Leu	Gly	Asp	His	Ser	Leu	Gln	Asn
			80						85					90
Lys	Asp	Gly	Pro	Glu	Gln	Glu	Ile	Pro	Val	Val	Gln	Ser	Ile	Pro
			95						100					105

His	Pro	Cys	Tyr	Asn	Ser	Ser	Asp	Val	Glu	Asp	His	Asn	His	Asp	110	115	120
Leu	Met	Leu	Leu	Gln	Leu	Arg	Asp	Gln	Ala	Ser	Leu	Gly	Ser	Lys	125	130	135
Val	Lys	Pro	Ile	Ser	Leu	Ala	Asp	His	Cys	Thr	Gln	Pro	Gly	Gln	140	145	150
Lys	Cys	Thr	Val	Ser	Gly	Trp	Gly	Thr	Val	Thr	Ser	Pro	Arg	Glu	155	160	165
Asn	Phe	Pro	Asp	Thr	Leu	Asn	Cys	Ala	Glu	Val	Lys	Ile	Phe	Pro	170	175	180
Gln	Lys	Lys	Cys	Glu	Asp	Ala	Tyr	Pro	Gly	Gln	Ile	Thr	Asp	Gly	185	190	195
Met	Val	Cys	Ala	Gly	Ser	Ser	Lys	Gly	Ala	Asp	Thr	Cys	Gln	Gly	200	205	210
Asp	Ser	Gly	Gly	Pro	Leu	Val	Cys	Asp	Gly	Ala	Leu	Gln	Gly	Ile	215	220	225
Thr	Ser	Trp	Gly	Ser	Asp	Pro	Cys	Gly	Arg	Ser	Asp	Lys	Pro	Gly	230	235	240
Val	Tyr	Thr	Asn	Ile	Cys	Arg	Tyr	Leu	Asp	Trp	Ile	Lys	Lys	Ile	245	250	255
Ile	Gly	Ser	Lys	Gly											260		

<210> 396

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 396

cagcctacag aataaagatg gccc 24

<210> 397

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 397

ggtgcaatga tctgccaggc tgat 24

<210> 398

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 398

agaaataacct gtggttcagt ccattccaaa ccctgctac aacagcag 48

<210> 399

<211> 2236

<212> DNA

<213> Homo sapiens

<400> 399

ggcgccggtg caccgggagg gctgagcgcc tcctgcggcc cggcctgcgc 50

gccccggccc gccgcgccgc ccacgcccc accccggccc gcgcccccta 100

gccccgccc gggcccgccgc ccgcgcccgc gccagggtga gcgctccgcc 150

cgccgcgagg ccccgcccc gcccgcgcc gcccgcccc ggccggcggg 200

ggaaccgggc ggattcctcg cgcgtcaaac cacctgatcc cataaaacat 250

tcattctccc ggcgcccgcc gctgcgagcg ccccgccagt ccgcgccgcc 300

gccgccctcg cctgtgccc cctgcgcgcc ctgcgcaccc gcggcccag 350

cccagccaga gccggggcga gcggagcgcg ccgagcctcg tcccgcgcc 400

gggcccgggc cgggcccgtg cggcgccgcc tggatgcgga cccggcccg 450

gggagacggg cggccgcccc gaaacgactt tcagtcccc acgcgcccc 500

cccaaccct acgatgaaga gggcgtccgc tggaggagc cggctgctg 550

catgggtgct gtggctgcag gcctggcagg tggcagcccc atgccagg 600

gcctgcgtat gctacaatga gcccaagggt acgacaagct gccccagca 650

gggcctgcag gctgtgccc tgggcatccc tgctgccagc cagcgcatct 700

tcctgcacgg caaccgcac tcgcatgtgc cagctgccag cttccgtgc 750

tgccgcaacc tcaccatcct gtggctgcac tcgaatgtgc tggcccgaat 800

tgatgcggct gccttcaact gcctggccct cctggagcag ctggacctca 850

gcgataatgc acagctccgg tctgtggacc ctgccacatt ccacggcctg 900

ggccgcctac acacgtgca cctggaccgc tgccgcctgc aggagctggg 950

cccggggctg ttcccgggcc tggctgcct gcagtacct tacctgcag 1000

acaacgcgct gcaggcaact cctgatgaca cttccgca cctgggcaac 1050

ctcacacacc tcttctgca cggcaaccgc atctccagc tgcccagcg 1100

cgccttccgt gggctgcaca gcctcgaccg tctcctactg caccagaacc 1150  
 gcgtggccca tgtgcacccg catgccttcc gtgaccttgg ccgcctcatg 1200  
 acactctatc tgtttgccaa caatctatca gcgctgcca ctgaggccct 1250  
 gggccccctg cgtgccctgc agtacctgag gctcaacgac aacccttggg 1300  
 tgtgtgactg ccgggcacgc ccaactctggg cctggctgca gaagttccgc 1350  
 ggctcctcct ccgaggtgcc ctgcagcctc ccgcaacgcc tggctggccg 1400  
 tgacctcaaa cgcctagctg ccaatgacct gcagggctgc gctgtggcca 1450  
 ccggccctta ccatcccatc tggaccggca gggccaccga tgaggagccg 1500  
 ctggggcttc ccaagtgtg ccagccagat gccgctgaca aggcctcagt 1550  
 actggagcct ggaagaccag cttcggcagg caatgcgctg aagggacgcg 1600  
 tgccgcccgg tgacagcccg ccgggcaacg gctctggccc acggcacatc 1650  
 aatgactcac cctttgggac tctgcctggc tctgctgagc ccccgctcac 1700  
 tgcagtgcgg ccgaggggct ccgagccacc agggttcccc acctcgggcc 1750  
 ctgcgccgag gccaggctgt tcacgcaaga accgcacccg cagccactgc 1800  
 cgtctgggcc aggcaggcag cgggggtggc gggactggtg actcagaagg 1850  
 ctcaggtgcc ctaccagcc tcacctgcag cctcaccccc ctgggcctgg 1900  
 cgctggtgct gtggacagtg cttgggccct gctgaccccc agcggacaca 1950  
 agagcgtgct cagcagccag gtgtgtgtac atacggggtc tctctccacg 2000  
 ccgccaagcc agccggggcg ccgaccctg gggcaggcca ggccaggtcc 2050  
 tccctgatgg acgcctgccg cccgccacc ccactctccac cccatcatgt 2100  
 ttacagggtt cggcggcagc gtttgttcca gaacgccgcc tcccaccag 2150  
 atcgcggtat atagagatat gcattttatt ttacttgtgt aaaaatatcg 2200  
 gacgacgtgg aataaagagc tcttttctta aaaaaa 2236

<210> 400

<211> 473

<212> PRT

<213> Homo sapiens

<400> 400

Met	Lys	Arg	Ala	Ser	Ala	Gly	Gly	Ser	Arg	Leu	Leu	Ala	Trp	Val
1				5				10						15
Leu	Trp	Leu	Gln	Ala	Trp	Gln	Val	Ala	Ala	Pro	Cys	Pro	Gly	Ala
			20					25						30



Cys	Val	Cys	Tyr	Asn	Glu	Pro	Lys	Val	Thr	Thr	Ser	Cys	Pro	Gln	35	40	45
Gln	Gly	Leu	Gln	Ala	Val	Pro	Val	Gly	Ile	Pro	Ala	Ala	Ser	Gln	50	55	60
Arg	Ile	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	His	Val	Pro	Ala	Ala	65	70	75
Ser	Phe	Arg	Ala	Cys	Arg	Asn	Leu	Thr	Ile	Leu	Trp	Leu	His	Ser	80	85	90
Asn	Val	Leu	Ala	Arg	Ile	Asp	Ala	Ala	Ala	Phe	Thr	Gly	Leu	Ala	95	100	105
Leu	Leu	Glu	Gln	Leu	Asp	Leu	Ser	Asp	Asn	Ala	Gln	Leu	Arg	Ser	110	115	120
Val	Asp	Pro	Ala	Thr	Phe	His	Gly	Leu	Gly	Arg	Leu	His	Thr	Leu	125	130	135
His	Leu	Asp	Arg	Cys	Gly	Leu	Gln	Glu	Leu	Gly	Pro	Gly	Leu	Phe	140	145	150
Arg	Gly	Leu	Ala	Ala	Leu	Gln	Tyr	Leu	Tyr	Leu	Gln	Asp	Asn	Ala	155	160	165
Leu	Gln	Ala	Leu	Pro	Asp	Asp	Thr	Phe	Arg	Asp	Leu	Gly	Asn	Leu	170	175	180
Thr	His	Leu	Phe	Leu	His	Gly	Asn	Arg	Ile	Ser	Ser	Val	Pro	Glu	185	190	195
Arg	Ala	Phe	Arg	Gly	Leu	His	Ser	Leu	Asp	Arg	Leu	Leu	Leu	His	200	205	210
Gln	Asn	Arg	Val	Ala	His	Val	His	Pro	His	Ala	Phe	Arg	Asp	Leu	215	220	225
Gly	Arg	Leu	Met	Thr	Leu	Tyr	Leu	Phe	Ala	Asn	Asn	Leu	Ser	Ala	230	235	240
Leu	Pro	Thr	Glu	Ala	Leu	Ala	Pro	Leu	Arg	Ala	Leu	Gln	Tyr	Leu	245	250	255
Arg	Leu	Asn	Asp	Asn	Pro	Trp	Val	Cys	Asp	Cys	Arg	Ala	Arg	Pro	260	265	270
Leu	Trp	Ala	Trp	Leu	Gln	Lys	Phe	Arg	Gly	Ser	Ser	Ser	Glu	Val	275	280	285
Pro	Cys	Ser	Leu	Pro	Gln	Arg	Leu	Ala	Gly	Arg	Asp	Leu	Lys	Arg	290	295	300
Leu	Ala	Ala	Asn	Asp	Leu	Gln	Gly	Cys	Ala	Val	Ala	Thr	Gly	Pro	305	310	315
Tyr	His	Pro	Ile	Trp	Thr	Gly	Arg	Ala	Thr	Asp	Glu	Glu	Pro	Leu			

320	325	330
Gly Leu Pro Lys Cys Cys Gln Pro Asp	Ala Ala Asp Lys Ala Ser	
335	340	345
Val Leu Glu Pro Gly Arg Pro Ala Ser	Ala Gly Asn Ala Leu Lys	
350	355	360
Gly Arg Val Pro Pro Gly Asp Ser Pro	Pro Gly Asn Gly Ser Gly	
365	370	375
Pro Arg His Ile Asn Asp Ser Pro Phe	Gly Thr Leu Pro Gly Ser	
380	385	390
Ala Glu Pro Pro Leu Thr Ala Val Arg	Pro Glu Gly Ser Glu Pro	
395	400	405
Pro Gly Phe Pro Thr Ser Gly Pro Arg	Arg Arg Pro Gly Cys Ser	
410	415	420
Arg Lys Asn Arg Thr Arg Ser His Cys	Arg Leu Gly Gln Ala Gly	
425	430	435
Ser Gly Gly Gly Gly Thr Gly Asp Ser	Glu Gly Ser Gly Ala Leu	
440	445	450
Pro Ser Leu Thr Cys Ser Leu Thr Pro	Leu Gly Leu Ala Leu Val	
455	460	465
Leu Trp Thr Val Leu Gly Pro Cys		
470		

<210> 401

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 401

tggtgccct gcagtacctc tacc 24

<210> 402

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 402

ccctgcaggt cattggcagc tagg 24

<210> 403

<211> 45

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 403

aggcactgcc tgatgacacc ttccgcgacc tgggcaacct cacac 45

<210> 404

<211> 2738

<212> DNA

<213> Homo sapiens

<400> 404

ggaagtccac ggggagcttg gatgccaaag ggaggacggc tgggtcctct 50  
ggagaggact actcactggc atattttctga ggtatctgta gaataaccac 100  
agcctcagat actggggact ttacagtccc acagaaccgt cctcccagga 150  
agctgaatcc agcaagaaca atggaggcca gcgggaagct catttgaga 200  
caaaggcaag tccttttttc ctttctcctt ttgggcttat ctctggcggg 250  
cgcggcggaa cctagaagct attctgtggt ggaggaaact gagggcagct 300  
cctttgtcac caatttagca aaggacctgg gtctggagca gagggaattc 350  
tccaggcggg gggttagggt tgtttccaga gggaacaaac tacatttgca 400  
gotcaatcag gagaccgagg atttggtgct aaatgagaaa ttggaccgtg 450  
aggatctgtg cggtcacaca gagccctgtg tgctacgttt ccaagtgttg 500  
ctagagagtc ctttcgagtt ttttcaagct gagctgcaag taatagacat 550  
aaacgaccac tctccagtat ttctggacaa acaaagtgtg gtgaaagtat 600  
cagagagcag tcctcctggg actacgtttc ctctgaagaa tgccgaagac 650  
ttagatgtag gccaaaacaa tattgagaac tatataatca gcccgaactc 700  
ctattttcgg gtcctcaccg gcaaacgcag tgatggcagg aaatacccag 750  
agctggtgct ggacaaagcg ctggaccgag aggaagaagc tgagctcagg 800  
ttaaactca cagcactgga tgggtggctct ccgcccagat ctggcactgc 850  
tcaggtctac atcgaagtcc tggatgtcaa cgataatgcc cctgaatttg 900  
agcagccttt ctatagagtg cagatctctg aggacagtcc ggtaggcttc 950  
ctggttggtga aggtctctgc cacggatgta gacacaggag tcaacggaga 1000  
gatttctat tcaacttttc aagcttcaga agagattggc aaaaccttta 1050  
agatcaatcc cttgacagga gaaattgaac taaaaaaaca actcgatttc 1100  
gaaaaacttc agtcctatga agtcaatatt gaggcaagag atgctggaac 1150

cttttctgga aaatgcaccg ttctgattca agtgatagat gtgaacgacc 1200  
 atgccccaga agttaccatg tctgcattta ccagcccaat acctgagaac 1250  
 gcgcctgaaa ctgtggttgc acttttcagt gtttcagatc ttgattcagg 1300  
 agaaaatggg aaaattagtt gctccattca ggaggatcta cccttcctcc 1350  
 tgaaatccgc ggaaaacttt tacaccctac taacggagag accactagac 1400  
 agagaaagca gagcggaata caacatcact atcactgtca ctgacttggg 1450  
 gaccctatg ctgataacac agctcaatat gaccgtgctg atcgccgatg 1500  
 tcaatgacaa cgctcccgcc ttcacccaaa cctcctacac cctgttcgtc 1550  
 cgcgagaaca acagccccgc cctgcacatc cgcagcgtca gcgctacaga 1600  
 cagagactca ggcaccaacg cccaggtcac ctactcgctg ctgccgcccc 1650  
 aggacccgca cctgcccctc acatccctgg tctccatcaa cgcggacaac 1700  
 ggccacctgt tcgccctcag gtctctggac tacgaggccc tgcaggggtt 1750  
 ccagttccgc gtgggcgctt cagaccaacg ctcgccggcg ctgagcagcg 1800  
 aggcgctggt gcgcgtggtg gtgctggacg ccaacgacaa ctgcgccctc 1850  
 gtgctgtacc cgctgcagaa cggctccgag ccctgcaccg agctggtgcc 1900  
 ccgggcgggc gagccgggct acctggtgac caaggtggtg gcggtggacg 1950  
 gcgactcggg ccagaacgcc tggctgtcgt accagctgct caaggccacg 2000  
 gagctcggtc tgttcggcgt gtgggcgcac aatggcgagg tgcgcaccgc 2050  
 caggctgctg agcgagcgcg acgcggccaa gcacaggctg gtggtgctgg 2100  
 tcaaggacaa tggcgagcct ccgcgctcgg ccaccgccac gctgcacgtg 2150  
 ctctgtgtgg acggcttctc ccagccctac ctgcctctcc cggaggcggc 2200  
 cccgaccag gccagggccg acttgctcac cgtctacctg gtggtggcgt 2250  
 tggcctcggg gtcttcgctc ttctctttt cgggtgctcct gttcgtggcg 2300  
 gtgcggtgtg gtaggaggag caggcgggcc tcggtgggtc gctgcttggg 2350  
 gcccgagggc ccccttcag ggcattctgt ggacatgagc ggcaccagga 2400  
 ccctatccca gagctaccag tatgaggtgt gtctggcagg aggctcaggg 2450  
 accaatgagt tcaagttcct gaagccgatt atccccaact tccctcccca 2500  
 gtgccttggg aaagaaatac aaggaaattc taccttcccc aataactttg 2550  
 ggttcaatat tcagtacca tagttgactt ttacattcca taggtatttt 2600

attttgtggc atttccatgc caatgtttat ttcccccaat ttgtgtgtat 2650  
 gtaatattgt acggatttac tcttgatttt tctcatgttc tttctccctt 2700  
 tgttttaaag tgaacattta cctttattcc tggttctt 2738

<210> 405  
 <211> 798  
 <212> PRT  
 <213> Homo sapiens

<400> 405  
 Met Glu Ala Ser Gly Lys Leu Ile Cys Arg Gln Arg Gln Val Leu  
 1 5 10 15  
 Phe Ser Phe Leu Leu Gly Leu Ser Leu Ala Gly Ala Ala Glu  
 20 25 30  
 Pro Arg Ser Tyr Ser Val Val Glu Glu Thr Glu Gly Ser Ser Phe  
 35 40 45  
 Val Thr Asn Leu Ala Lys Asp Leu Gly Leu Glu Gln Arg Glu Phe  
 50 55 60  
 Ser Arg Arg Gly Val Arg Val Val Ser Arg Gly Asn Lys Leu His  
 65 70 75  
 Leu Gln Leu Asn Gln Glu Thr Ala Asp Leu Leu Leu Asn Glu Lys  
 80 85 90  
 Leu Asp Arg Glu Asp Leu Cys Gly His Thr Glu Pro Cys Val Leu  
 95 100 105  
 Arg Phe Gln Val Leu Leu Glu Ser Pro Phe Glu Phe Phe Gln Ala  
 110 115 120  
 Glu Leu Gln Val Ile Asp Ile Asn Asp His Ser Pro Val Phe Leu  
 125 130 135  
 Asp Lys Gln Met Leu Val Lys Val Ser Glu Ser Ser Pro Pro Gly  
 140 145 150  
 Thr Thr Phe Pro Leu Lys Asn Ala Glu Asp Leu Asp Val Gly Gln  
 155 160 165  
 Asn Asn Ile Glu Asn Tyr Ile Ile Ser Pro Asn Ser Tyr Phe Arg  
 170 175 180  
 Val Leu Thr Arg Lys Arg Ser Asp Gly Arg Lys Tyr Pro Glu Leu  
 185 190 195  
 Val Leu Asp Lys Ala Leu Asp Arg Glu Glu Glu Ala Glu Leu Arg  
 200 205 210  
 Leu Thr Leu Thr Ala Leu Asp Gly Gly Ser Pro Pro Arg Ser Gly  
 215 220 225  
 Thr Ala Gln Val Tyr Ile Glu Val Leu Asp Val Asn Asp Asn Ala

230										235					240				
Pro	Glu	Phe	Glu	Gln	Pro	Phe	Tyr	Arg	Val	Gln	Ile	Ser	Glu	Asp					
				245					250					255					
Ser	Pro	Val	Gly	Phe	Leu	Val	Val	Lys	Val	Ser	Ala	Thr	Asp	Val					
				260					265					270					
Asp	Thr	Gly	Val	Asn	Gly	Glu	Ile	Ser	Tyr	Ser	Leu	Phe	Gln	Ala					
				275					280					285					
Ser	Glu	Glu	Ile	Gly	Lys	Thr	Phe	Lys	Ile	Asn	Pro	Leu	Thr	Gly					
				290					295					300					
Glu	Ile	Glu	Leu	Lys	Lys	Gln	Leu	Asp	Phe	Glu	Lys	Leu	Gln	Ser					
				305					310					315					
Tyr	Glu	Val	Asn	Ile	Glu	Ala	Arg	Asp	Ala	Gly	Thr	Phe	Ser	Gly					
				320					325					330					
Lys	Cys	Thr	Val	Leu	Ile	Gln	Val	Ile	Asp	Val	Asn	Asp	His	Ala					
				335					340					345					
Pro	Glu	Val	Thr	Met	Ser	Ala	Phe	Thr	Ser	Pro	Ile	Pro	Glu	Asn					
				350					355					360					
Ala	Pro	Glu	Thr	Val	Val	Ala	Leu	Phe	Ser	Val	Ser	Asp	Leu	Asp					
				365					370					375					
Ser	Gly	Glu	Asn	Gly	Lys	Ile	Ser	Cys	Ser	Ile	Gln	Glu	Asp	Leu					
				380					385					390					
Pro	Phe	Leu	Leu	Lys	Ser	Ala	Glu	Asn	Phe	Tyr	Thr	Leu	Leu	Thr					
				395					400					405					
Glu	Arg	Pro	Leu	Asp	Arg	Glu	Ser	Arg	Ala	Glu	Tyr	Asn	Ile	Thr					
				410					415					420					
Ile	Thr	Val	Thr	Asp	Leu	Gly	Thr	Pro	Met	Leu	Ile	Thr	Gln	Leu					
				425					430					435					
Asn	Met	Thr	Val	Leu	Ile	Ala	Asp	Val	Asn	Asp	Asn	Ala	Pro	Ala					
				440					445					450					
Phe	Thr	Gln	Thr	Ser	Tyr	Thr	Leu	Phe	Val	Arg	Glu	Asn	Asn	Ser					
				455					460					465					
Pro	Ala	Leu	His	Ile	Arg	Ser	Val	Ser	Ala	Thr	Asp	Arg	Asp	Ser					
				470					475					480					
Gly	Thr	Asn	Ala	Gln	Val	Thr	Tyr	Ser	Leu	Leu	Pro	Pro	Gln	Asp					
				485					490					495					
Pro	His	Leu	Pro	Leu	Thr	Ser	Leu	Val	Ser	Ile	Asn	Ala	Asp	Asn					
				500					505					510					
Gly	His	Leu	Phe	Ala	Leu	Arg	Ser	Leu	Asp	Tyr	Glu	Ala	Leu	Gln					
				515					520					525					

Gly	Phe	Gln	Phe	Arg	Val	Gly	Ala	Ser	Asp	His	Gly	Ser	Pro	Ala	530	535	540
Leu	Ser	Ser	Glu	Ala	Leu	Val	Arg	Val	Val	Val	Leu	Asp	Ala	Asn	545	550	555
Asp	Asn	Ser	Pro	Phe	Val	Leu	Tyr	Pro	Leu	Gln	Asn	Gly	Ser	Ala	560	565	570
Pro	Cys	Thr	Glu	Leu	Val	Pro	Arg	Ala	Ala	Glu	Pro	Gly	Tyr	Leu	575	580	585
Val	Thr	Lys	Val	Val	Ala	Val	Asp	Gly	Asp	Ser	Gly	Gln	Asn	Ala	590	595	600
Trp	Leu	Ser	Tyr	Gln	Leu	Leu	Lys	Ala	Thr	Glu	Leu	Gly	Leu	Phe	605	610	615
Gly	Val	Trp	Ala	His	Asn	Gly	Glu	Val	Arg	Thr	Ala	Arg	Leu	Leu	620	625	630
Ser	Glu	Arg	Asp	Ala	Ala	Lys	His	Arg	Leu	Val	Val	Leu	Val	Lys	635	640	645
Asp	Asn	Gly	Glu	Pro	Pro	Arg	Ser	Ala	Thr	Ala	Thr	Leu	His	Val	650	655	660
Leu	Leu	Val	Asp	Gly	Phe	Ser	Gln	Pro	Tyr	Leu	Pro	Leu	Pro	Glu	665	670	675
Ala	Ala	Pro	Thr	Gln	Ala	Gln	Ala	Asp	Leu	Leu	Thr	Val	Tyr	Leu	680	685	690
Val	Val	Ala	Leu	Ala	Ser	Val	Ser	Ser	Leu	Phe	Leu	Phe	Ser	Val	695	700	705
Leu	Leu	Phe	Val	Ala	Val	Arg	Leu	Cys	Arg	Arg	Ser	Arg	Ala	Ala	710	715	720
Ser	Val	Gly	Arg	Cys	Leu	Val	Pro	Glu	Gly	Pro	Leu	Pro	Gly	His	725	730	735
Leu	Val	Asp	Met	Ser	Gly	Thr	Arg	Thr	Leu	Ser	Gln	Ser	Tyr	Gln	740	745	750
Tyr	Glu	Val	Cys	Leu	Ala	Gly	Gly	Ser	Gly	Thr	Asn	Glu	Phe	Lys	755	760	765
Phe	Leu	Lys	Pro	Ile	Ile	Pro	Asn	Phe	Pro	Pro	Gln	Cys	Pro	Gly	770	775	780
Lys	Glu	Ile	Gln	Gly	Asn	Ser	Thr	Phe	Pro	Asn	Asn	Phe	Gly	Phe	785	790	795
Asn	Ile	Gln															

<210> 406

<211> 23  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 406  
ctgagaacgc gcctgaaact gtg 23

<210> 407  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 407  
agcgttgatca ttgacatcgg cg 22

<210> 408  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 408  
ttagttgctc cattcaggag gatctaccct tcctcctgaa atccgcggaa 50

<210> 409  
<211> 1379  
<212> DNA  
<213> Homo sapiens

<400> 409  
accacgcgt ccgcccacgc gtccgcccac gcgtccgccc acgcgtccgc 50  
gcgtagccgt gcgccgattg cctctcggcc tgggcaatgg tcccggctgc 100  
cggtcgacga ccgccccgcg tcatgoggct cctcggctgg tggcaagtat 150  
tgctgtgggt gctgggactt cccgtccgcg gcgtggaggt tgcagaggaa 200  
agtggtcgct tatggtcaga ggagcagcct gctcaccctc tccaggtggg 250  
ggctgtgtac ctgggtgagg aggagctcct gcatgacccg atgggccagg 300  
acagggcagc agaagaggcc aatgcggtgc tggggctgga caccgaaggc 350  
gatcacatgg tgatgctgtc tgtgattcct ggggaagctg aggacaaagt 400  
gagttcagag cctagcggcg tcacctgtgg tgctggagga gcggaggact 450  
caaggtgcaa cgtccgagag agccttttct ctctggatgg cgctggagca 500



cacttcctg acagagaaga ggagtattac acagagccag aagtggcgga 550  
 atctgacgca gccccgacag aggactccaa taacactgaa agtctgaaat 600  
 ccccaaaggt gaactgtgag gagagaaaca ttacaggatt agaaaatttc 650  
 actctgaaaa ttttaaataat gtcacaggac cttatggatt ttctgaaccc 700  
 aaacggtagt gactgtactc tagtcctgtt ttacaccccg tgggtgcogct 750  
 tttctgccag tttggcccct cactttaact ctctgccccg ggcattttcca 800  
 gctcttcact ttttggcact ggatgcatct cagcacagca gcctttctac 850  
 caggtttggc accgtagctg ttcctaataat tttattatit caaggagcta 900  
 aaccaatggc cagatttaat catacagatc gaacactgga aacactgaaa 950  
 atcttcattt ttaatcagac aggtatagaa gccaagaaga atgtggtggt 1000  
 aactcaagcc gaccaaatag gccctcttcc cagcactttg ataaaaagtg 1050  
 tggactgggt gcttgtattt tccttattct ttttaattag ttttattatg 1100  
 tatgctacca ttcgaactga gagtattcgg tggctaattc caggacaaga 1150  
 gcaggaacat gtggagtagt gatggctctga aagaagttgg aaagaggaac 1200  
 ttcaatcctt cgtttcagaa attagtgcta cagtttcata cattttotcc 1250  
 agtgacgtgt tgacttgaaa cttcaggcag attaaaagaa tcatttgttg 1300  
 aacaactgaa tgtataaaaa aattataaac tgggtgttta actagtattg 1350  
 caataagcaa atgcaaaaaat attcaatag 1379

<210> 410

<211> 360

<212> PRT

<213> Homo sapiens

<400> 410

Met	Val	Pro	Ala	Ala	Gly	Arg	Arg	Pro	Pro	Arg	Val	Met	Arg	Leu
1				5					10					15

Leu	Gly	Trp	Trp	Gln	Val	Leu	Leu	Trp	Val	Leu	Gly	Leu	Pro	Val
				20					25					30

Arg	Gly	Val	Glu	Val	Ala	Glu	Glu	Ser	Gly	Arg	Leu	Trp	Ser	Glu
				35					40					45

Glu	Gln	Pro	Ala	His	Pro	Leu	Gln	Val	Gly	Ala	Val	Tyr	Leu	Gly
				50					55					60

Glu	Glu	Glu	Leu	Leu	His	Asp	Pro	Met	Gly	Gln	Asp	Arg	Ala	Ala
				65					70					75

Glu	Glu	Ala	Asn	Ala	Val	Leu	Gly	Leu	Asp	Thr	Gln	Gly	Asp	His
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

80										85					90				
Met	Val	Met	Leu	Ser	Val	Ile	Pro	Gly	Glu	Ala	Glu	Asp	Lys	Val					
				95					100					105					
Ser	Ser	Glu	Pro	Ser	Gly	Val	Thr	Cys	Gly	Ala	Gly	Gly	Ala	Glu					
				110					115					120					
Asp	Ser	Arg	Cys	Asn	Val	Arg	Glu	Ser	Leu	Phe	Ser	Leu	Asp	Gly					
				125					130					135					
Ala	Gly	Ala	His	Phe	Pro	Asp	Arg	Glu	Glu	Glu	Tyr	Tyr	Thr	Glu					
				140					145					150					
Pro	Glu	Val	Ala	Glu	Ser	Asp	Ala	Ala	Pro	Thr	Glu	Asp	Ser	Asn					
				155					160					165					
Asn	Thr	Glu	Ser	Leu	Lys	Ser	Pro	Lys	Val	Asn	Cys	Glu	Glu	Arg					
				170					175					180					
Asn	Ile	Thr	Gly	Leu	Glu	Asn	Phe	Thr	Leu	Lys	Ile	Leu	Asn	Met					
				185					190					195					
Ser	Gln	Asp	Leu	Met	Asp	Phe	Leu	Asn	Pro	Asn	Gly	Ser	Asp	Cys					
				200					205					210					
Thr	Leu	Val	Leu	Phe	Tyr	Thr	Pro	Trp	Cys	Arg	Phe	Ser	Ala	Ser					
				215					220					225					
Leu	Ala	Pro	His	Phe	Asn	Ser	Leu	Pro	Arg	Ala	Phe	Pro	Ala	Leu					
				230					235					240					
His	Phe	Leu	Ala	Leu	Asp	Ala	Ser	Gln	His	Ser	Ser	Leu	Ser	Thr					
				245					250					255					
Arg	Phe	Gly	Thr	Val	Ala	Val	Pro	Asn	Ile	Leu	Leu	Phe	Gln	Gly					
				260					265					270					
Ala	Lys	Pro	Met	Ala	Arg	Phe	Asn	His	Thr	Asp	Arg	Thr	Leu	Glu					
				275					280					285					
Thr	Leu	Lys	Ile	Phe	Ile	Phe	Asn	Gln	Thr	Gly	Ile	Glu	Ala	Lys					
				290					295					300					
Lys	Asn	Val	Val	Val	Thr	Gln	Ala	Asp	Gln	Ile	Gly	Pro	Leu	Pro					
				305					310					315					
Ser	Thr	Leu	Ile	Lys	Ser	Val	Asp	Trp	Leu	Leu	Val	Phe	Ser	Leu					
				320					325					330					
Phe	Phe	Leu	Ile	Ser	Phe	Ile	Met	Tyr	Ala	Thr	Ile	Arg	Thr	Glu					
				335					340					345					
Ser	Ile	Arg	Trp	Leu	Ile	Pro	Gly	Gln	Glu	Gln	Glu	His	Val	Glu					
				350					355					360					

<210> 411  
 <211> 24

<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 411  
cacagagcca gaagtggcgg aatc 24

<210> 412  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 412  
ccacatgttc ctgctcttgg cctgg 25

<210> 413  
<211> 45  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 413  
cggtagtgc tgcactctag tctgtttta caccctgtgg tgccg 45

<210> 414  
<211> 1196  
<212> DNA  
<213> Homo sapiens

<400> 414  
cccggctccg ctccctctgc cccctcgggg tcgcgcgccc acgatgctgc 50  
agggccctgg ctgcctctgc ctgctcttcc tcgcctcgca ctgctgcctg 100  
ggctcggcgc gcgggctctt cctctttggc cagcccgact tctcctacaa 150  
gcgcagcaat tgcaagccca tcccgggtcaa cctgcagctg tgccacggca 200  
tcgaatacca gaacatgcgg ctgcccacc tgctgggcca cgagaccatg 250  
aaggaggctgc tggagcaggc cggcgcttgg atcccgtgg tcatgaagca 300  
gtgccacccg gacaccaaga agttcctgtg ctgcctcttc gccccgtct 350  
gcctcgatga cctagacgag accatccagc catgccactc gctctgcgtg 400  
caggtgaagg accgctgcgc cccggtcatg tccgccttcg gcttcccctg 450  
gcccgcacatg cttgagtgcg accgtttccc ccaggacaac gacctttgca 500  
tccccctcgc tagcagcgac cacctcctgc cagccaccga ggaagctcca 550

aaggtatgtg aagcctgcaa aaataaaaat gatgatgaca acgacataat 600  
ggaaacgctt tgtaaaaatg attttgcact gaaaataaaa gtgaaggaga 650  
taacctacat caaccgagat accaaaatca tcctggagac caagagcaag 700  
accatttaca agctgaacgg tgtgtccgaa agggacctga agaaatcgg 750  
gctgtggctc aaagacagct tgcagtgcac ctgtgaggag atgaacgaca 800  
tcaacgcgcc ctatctggtc atgggacaga aacaggggtg ggagctggtg 850  
atcacctcgg tgaagcggtg gcagaagggg cagagagagt tcaagcgcat 900  
ctccgcagc atccgcaagc tgcagtgcta gtcccgcat cctgatggct 950  
ccgacaggcc tgctccagag cacggctgac catttctgct ccgggatctc 1000  
agctcccgtt cccaagcac actcctagct gctccagtct cagcctgggc 1050  
agcttcccc tgccttttgc acgtttgcat cccagcatt tcctgagtta 1100  
taaggccaca ggagtggata gctgttttca cctaaaggaa aagcccaccc 1150  
gaatcttgta gaaatattca aactaataaa atcatgaata ttttaa 1196

<210> 415

<211> 295

<212> PRT

<213> Homo sapiens

<400> 415

Met	Leu	Gln	Gly	Pro	Gly	Ser	Leu	Leu	Leu	Leu	Phe	Leu	Ala	Ser	1	5	10	15
His	Cys	Cys	Leu	Gly	Ser	Ala	Arg	Gly	Leu	Phe	Leu	Phe	Gly	Gln	20	25	30	
Pro	Asp	Phe	Ser	Tyr	Lys	Arg	Ser	Asn	Cys	Lys	Pro	Ile	Pro	Val	35	40	45	
Asn	Leu	Gln	Leu	Cys	His	Gly	Ile	Glu	Tyr	Gln	Asn	Met	Arg	Leu	50	55	60	
Pro	Asn	Leu	Leu	Gly	His	Glu	Thr	Met	Lys	Glu	Val	Leu	Glu	Gln	65	70	75	
Ala	Gly	Ala	Trp	Ile	Pro	Leu	Val	Met	Lys	Gln	Cys	His	Pro	Asp	80	85	90	
Thr	Lys	Lys	Phe	Leu	Cys	Ser	Leu	Phe	Ala	Pro	Val	Cys	Leu	Asp	95	100	105	
Asp	Leu	Asp	Glu	Thr	Ile	Gln	Pro	Cys	His	Ser	Leu	Cys	Val	Gln	110	115	120	
Val	Lys	Asp	Arg	Cys	Ala	Pro	Val	Met	Ser	Ala	Phe	Gly	Phe	Pro	125	130	135	

Trp	Pro	Asp	Met	Leu	Glu	Cys	Asp	Arg	Phe	Pro	Gln	Asp	Asn	Asp	
				140					145					150	
Leu	Cys	Ile	Pro	Leu	Ala	Ser	Ser	Asp	His	Leu	Leu	Pro	Ala	Thr	
				155					160					165	
Glu	Glu	Ala	Pro	Lys	Val	Cys	Glu	Ala	Cys	Lys	Asn	Lys	Asn	Asp	
				170					175					180	
Asp	Asp	Asn	Asp	Ile	Met	Glu	Thr	Leu	Cys	Lys	Asn	Asp	Phe	Ala	
				185					190					195	
Leu	Lys	Ile	Lys	Val	Lys	Glu	Ile	Thr	Tyr	Ile	Asn	Arg	Asp	Thr	
				200					205					210	
Lys	Ile	Ile	Leu	Glu	Thr	Lys	Ser	Lys	Thr	Ile	Tyr	Lys	Leu	Asn	
				215					220					225	
Gly	Val	Ser	Glu	Arg	Asp	Leu	Lys	Lys	Ser	Val	Leu	Trp	Leu	Lys	
				230					235					240	
Asp	Ser	Leu	Gln	Cys	Thr	Cys	Glu	Glu	Met	Asn	Asp	Ile	Asn	Ala	
				245					250					255	
Pro	Tyr	Leu	Val	Met	Gly	Gln	Lys	Gln	Gly	Gly	Glu	Leu	Val	Ile	
				260					265					270	
Thr	Ser	Val	Lys	Arg	Trp	Gln	Lys	Gly	Gln	Arg	Glu	Phe	Lys	Arg	
				275					280					285	
Ile	Ser	Arg	Ser	Ile	Arg	Lys	Leu	Gln	Cys						
				290					295						

<210> 416

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 416

cctggctcgc tgctgctgct c 21

<210> 417

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 417

cctcacaggt gcactgcaag ctgtc 25

<210> 418

<211> 47

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 418

ctcttcctct ttggccagcc cgacttctcc tacaagcgca gaattgc 47

<210> 419

<211> 1830

<212> DNA

<213> Homo sapiens

<400> 419

gtggaggccg ccgacgatgg cggggccgac ggaggccgag acgggggttg 50

ccgagccccg ggccctgtgc gcgcagcggg gccaccgcac ctacgcgcgc 100

cgctgggtgt tcctgctcgc gatcagcctg ctcaactgct ccaacgccac 150

gctgtggctc agctttgcac ctgtggctga cgtcattgct gaggacttgg 200

tcctgtccat ggagcagatc aactggctgt cactggctta cctcgtggta 250

tccaccccat ttggcgtggc ggccatctgg atcctggact ccgtcgggct 300

ccgtgcggcg accatcctgg gtgcgtggct gaactttgcc gggagtgtgc 350

tacgcatggt gccctgcatg gttgttggga cccaaaaccc atttgccttc 400

ctcatgggtg gccagagcct ctgtgccctt gccagagcc tggatcatctt 450

ctctccagcc aagctggctg ccttgtgggt cccagagcac cagcagacca 500

cggccaacat gctcgccacc atgtogaacc ctctgggcgt ccttgtggcc 550

aatgtgctgt cccctgtgct ggtcaagaag ggtgaggaca ttccgttaat 600

gctcgggtgc tataccatcc ctgctggcgt cgtctgcctg ctgtccacca 650

tctgcctgtg ggagagtgtg cccccaccc cgccctctgc cggggctgcc 700

agctccacct cagagaagtt cctggatggg ctcaagctgc agctcatgtg 750

gaacaaggcc tatgtcatcc tggctgtgtg cttgggggga atgatcggga 800

tctctgccag cttctcagcc ctctggagc agatcctctg tgcaagcggc 850

cactccagtg ggttttccgg cctctgtggc gctctcttca tcacgtttgg 900

gatcctgggg gcactggctc tcggccccta tgtggaccgg accaagcact 950

tcactgaggc caccaagatt ggccctgtgc tgttctctct ggccctgcgtg 1000

ccctttgcc tgggtgtcca gctgcaggga cagacccttg ccctggctgc 1050

cacctgctcg ctgctcgggc tgtttggcct ctcggtgggc cccgtggcca 1100

tggagttggc ggtcagagtgt tccttccccg tgggggaggg ggctgccaca 1150  
 ggcatgatct ttgtgctggg gcaggccgag ggaataactca tcatgctggc 1200  
 aatgacggca ctgactgtgc gacgctcgga gccgtccttg tccacctgcc 1250  
 agcaggggga ggatccactt gactggacag tgtctctgct gctgatggcc 1300  
 ggcctgtgca ccttcttcag ctgcatcctg gcggtcttct tccacacccc 1350  
 atacgggcgc ctgcaggccg agtctgggga gccccctcc acccgtaacg 1400  
 ccgtgggcgg cgagactca gggccgggtg tggaccgagg gggagcagga 1450  
 agggctgggg tcctggggcc cagcacggcg actccggagt gcacggcgag 1500  
 gggggcctcg ctagaggacc ccagagggcc cgggagcccc caccagcct 1550  
 gccaccgagc gactccccgt gcgcaaggcc cagcagccac cgacgcgccc 1600  
 tcccgccccg gcagactcgc aggcagggtc caagcgtcca ggtttattga 1650  
 cccggctggg tctcactcct ccttctcctc cccgtgggtg atcacgtagc 1700  
 tgagcgcctt gtagtccagg ttgcccgcc catcgatgga ggcgaaactgg 1750  
 aacatctggt ccacctgcgg gcgggggcga aagggtcctt tgcgggctcc 1800  
 gggagcgaat tacaagcgcg cacctgaaaa 1830

<210> 420  
 <211> 560  
 <212> PRT  
 <213> Homo sapiens

<400> 420  
 Met Ala Gly Pro Thr Glu Ala Glu Thr Gly Leu Ala Glu Pro Arg  
 1 5 10 15  
 Ala Leu Cys Ala Gln Arg Gly His Arg Thr Tyr Ala Arg Arg Trp  
 20 25 30  
 Val Phe Leu Leu Ala Ile Ser Leu Leu Asn Cys Ser Asn Ala Thr  
 35 40 45  
 Leu Trp Leu Ser Phe Ala Pro Val Ala Asp Val Ile Ala Glu Asp  
 50 55 60  
 Leu Val Leu Ser Met Glu Gln Ile Asn Trp Leu Ser Leu Val Tyr  
 65 70 75  
 Leu Val Val Ser Thr Pro Phe Gly Val Ala Ala Ile Trp Ile Leu  
 80 85 90  
 Asp Ser Val Gly Leu Arg Ala Ala Thr Ile Leu Gly Ala Trp Leu  
 95 100 105  
 Asn Phe Ala Gly Ser Val Leu Arg Met Val Pro Cys Met Val Val

110	115	120
Gly Thr Gln Asn Pro Phe Ala Phe Leu Met Gly Gly Gln Ser Leu		
125	130	135
Cys Ala Leu Ala Gln Ser Leu Val Ile Phe Ser Pro Ala Lys Leu		
140	145	150
Ala Ala Leu Trp Phe Pro Glu His Gln Arg Ala Thr Ala Asn Met		
155	160	165
Leu Ala Thr Met Ser Asn Pro Leu Gly Val Leu Val Ala Asn Val		
170	175	180
Leu Ser Pro Val Leu Val Lys Lys Gly Glu Asp Ile Pro Leu Met		
185	190	195
Leu Gly Val Tyr Thr Ile Pro Ala Gly Val Val Cys Leu Leu Ser		
200	205	210
Thr Ile Cys Leu Trp Glu Ser Val Pro Pro Thr Pro Pro Ser Ala		
215	220	225
Gly Ala Ala Ser Ser Thr Ser Glu Lys Phe Leu Asp Gly Leu Lys		
230	235	240
Leu Gln Leu Met Trp Asn Lys Ala Tyr Val Ile Leu Ala Val Cys		
245	250	255
Leu Gly Gly Met Ile Gly Ile Ser Ala Ser Phe Ser Ala Leu Leu		
260	265	270
Glu Gln Ile Leu Cys Ala Ser Gly His Ser Ser Gly Phe Ser Gly		
275	280	285
Leu Cys Gly Ala Leu Phe Ile Thr Phe Gly Ile Leu Gly Ala Leu		
290	295	300
Ala Leu Gly Pro Tyr Val Asp Arg Thr Lys His Phe Thr Glu Ala		
305	310	315
Thr Lys Ile Gly Leu Cys Leu Phe Ser Leu Ala Cys Val Pro Phe		
320	325	330
Ala Leu Val Ser Gln Leu Gln Gly Gln Thr Leu Ala Leu Ala Ala		
335	340	345
Thr Cys Ser Leu Leu Gly Leu Phe Gly Phe Ser Val Gly Pro Val		
350	355	360
Ala Met Glu Leu Ala Val Glu Cys Ser Phe Pro Val Gly Glu Gly		
365	370	375
Ala Ala Thr Gly Met Ile Phe Val Leu Gly Gln Ala Glu Gly Ile		
380	385	390
Leu Ile Met Leu Ala Met Thr Ala Leu Thr Val Arg Arg Ser Glu		
395	400	405



Pro	Ser	Leu	Ser	Thr	Cys	Gln	Gln	Gly	Glu	Asp	Pro	Leu	Asp	Trp
				410					415					420
Thr	Val	Ser	Leu	Leu	Leu	Met	Ala	Gly	Leu	Cys	Thr	Phe	Phe	Ser
				425					430					435
Cys	Ile	Leu	Ala	Val	Phe	Phe	His	Thr	Pro	Tyr	Arg	Arg	Leu	Gln
				440					445					450
Ala	Glu	Ser	Gly	Glu	Pro	Pro	Ser	Thr	Arg	Asn	Ala	Val	Gly	Gly
				455					460					465
Ala	Asp	Ser	Gly	Pro	Gly	Val	Asp	Arg	Gly	Gly	Ala	Gly	Arg	Ala
				470					475					480
Gly	Val	Leu	Gly	Pro	Ser	Thr	Ala	Thr	Pro	Glu	Cys	Thr	Ala	Arg
				485					490					495
Gly	Ala	Ser	Leu	Glu	Asp	Pro	Arg	Gly	Pro	Gly	Ser	Pro	His	Pro
				500					505					510
Ala	Cys	His	Arg	Ala	Thr	Pro	Arg	Ala	Gln	Gly	Pro	Ala	Ala	Thr
				515					520					525
Asp	Ala	Pro	Ser	Arg	Pro	Gly	Arg	Leu	Ala	Gly	Arg	Val	Gln	Ala
				530					535					540
Ser	Arg	Phe	Ile	Asp	Pro	Ala	Gly	Ser	His	Ser	Ser	Phe	Ser	Ser
				545					550					555
Pro	Trp	Val	Ile	Thr										
				560										

<210> 421

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 421

agcttctcag ccctcctgga gcag 24

<210> 422

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 422

cgggtcaata aacctggacg cttgg 25

<210> 423

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 423

tatgtggacc ggaccaagca cttcactgag gccaccaaga ttg 43

<210> 424

<211> 4313

<212> DNA

<213> Homo sapiens

<400> 424

gtccacatc ctgctcaact gggtcaggtc cctcttagac cagctcttgt 50

ccatcatttg ctgaagtgga ccaactagtt cccagtagg gggctctccc 100

tggcaattct tgatcggcgt ttggacatct cagatcgctt ccaatgaaga 150

tggccttgcc ttggggctct gcttggttca taatcatcta actatgggac 200

aagggttgtgc cggcagctct gggggaagga gcacggggct gatcaagcca 250

tccaggaaac actggaggac ttgtccagcc ttgaaagaac tctagtgggt 300

tctgaatcta gccacttggt cggttaagcat gatgcaactt ctgcaacttc 350

tgtggtgggt tttggggcca ggtggctact tatttctttt aggggattgt 400

caggaggtga ccactctcac ggtgaaatac caagtgtcag aggaagtgcc 450

atctggtaca gtgatcggga agctgtccca ggaactgggc cgggaggaga 500

ggcggaggca agctggggcc gccttcacag tgttgacagct gcctcaggcg 550

ctccccattc aggtggactc tgaggaaggc ttgctcagca caggcaggcg 600

gctggatcga gagcagctgt gccgacagtg ggatccctgc ctggtttctt 650

ttgatgtgct tgccacaggg gatttggctc tgatccatgt ggagatccaa 700

gtgctggaca tcaatgacca ccagccacgg tttcccaaag gcgagcagga 750

gctggaaatc tctgagagcg cctctctgcg aaccgggac ccctggaca 800

gagctcttga ccagacaca ggcctaaca ccctgcacac ctacactctg 850

totcccagtg agcactttgc cttggatgtc attgtgggac ctgatgagac 900

caaacatgca gaactcatag tggatgaagga gctggacagg gaaatccatt 950

catttttttga totggtgtta actgcctatg acaatgggaa ccccccaag 1000

tcaggtaacca gcttgggtcaa ggtcaacgtc ttggactcca atgacaatag 1050

ccctgcgttt gctgagagtt cactggcact ggaaatccaa gaagatgctg 1100

cacctggtac gcttctcata aaactgaccg ccacagaccc tgaccaaggc 1150  
cccaatgggg aggtggagtt cttcctcagt aagcacatgc ctccagaggt 1200  
gctggacacc ttcagtattg atgccaagac aggccaggtc attctgcgtc 1250  
gacctctaga ctatgaaaag aaccctgcct acgaggtgga tgttcaggca 1300  
agggacctgg gtcccaatcc tatccagcc cattgcaaag ttctcatcaa 1350  
ggttctggat gtcaatgaca acatcccaag catccacgtc acatgggcct 1400  
cccagccatc actggtgtca gaagctcttc ccaaggacag ttttattgct 1450  
cttgtcatgg cagatgactt ggattcagga cacaatggtt tggccactg 1500  
ctggctgagc caagagctgg gccacttcag gctgaaaaga actaatggca 1550  
acacatacat gttgctaacc aatgccacac tggacagaga gcagtggccc 1600  
aaatataccc tcaactctgtt agcccaagac caaggactcc agcccttatc 1650  
agccaagaaa cagctcagca ttcagatcag tgacatcaac gacaatgcac 1700  
ctgtgtttga gaaaagcagg tatgaagtct ccacgcggga aaacaactta 1750  
ccctctcttc acctcattac catcaaggct catgatgcag acttgggcat 1800  
taatggaaaa gtctcatacc gcatccagga ctcccagtt gctcacttag 1850  
tagctattga ctccaacaca ggagaggtca ctgctcagag gtcactgaac 1900  
tatgaagaga tggccggctt tgagttccag gtgatcgag aggacagcg 1950  
gcaacccatg cttgcatcca gtgtctctgt gtgggtcagc ctcttggatg 2000  
ccaatgataa tgcccagag gtggtccagc ctgtgctcag cgatggaaaa 2050  
gccagcctct cgtgcttgt gaatgcctcc acaggccacc tgctggtgcc 2100  
catcgagact cccaatggct tgggcccagc gggcactgac acacctccac 2150  
tggccactca cagctcccg ccattccttt tgacaaccat tgtggcaaga 2200  
gatgcagact cgggggcaaa tggagagccc ctctacagca tccgcaatgg 2250  
aaatgaagcc cacctcttca tctcaaccc tcatacgggg cagctgttcg 2300  
tcaatgtcac caatgccagc agcctcattg ggagtgagt ggagctggag 2350  
atagtagtag aggaocagg aagccccccc ttacagaccc gagccctgtt 2400  
gagggtoatg tttgtcacca gtgtggacca cctgaggagc tcagcccga 2450  
agcctggggc cttgagcatg tcgatgctga cggatgatct cctggctgta 2500  
ctgttgggca tcttcgggtt gatcctggct ttgttcatgt ccatctgccg 2550

gacagaaaag aaggacaaca gggcctacaa ctgtcgggag gccgagtcca 2600  
cctaccgcca gcagcccaag aggccccaga aacacattca gaaggcagac 2650  
atccacctcg tgccctgtgct caggggtcag gcaggtgagc cttgtgaagt 2700  
cgggcagtcc cacaagatg tggacaagga ggcgatgatg gaagcaggct 2750  
gggacccctg cctgcaggcc cccttccacc tcaccccgac cctgtacagg 2800  
acgtgcgta atcaaggcaa ccaggagca ccggcggaga gccgagaggt 2850  
gctgcaagac acggtcaacc tccttttcaa ccatcccagg cagaggaatg 2900  
cctcccggga gaacctgaac cttcccgagc cccagcctgc cacaggccag 2950  
ccacgttcca ggccctctgaa ggttgcaggc agccccacag ggaggctggc 3000  
tggagaccag ggcagtgagg aagccccaca gaggccacca gcctcctctg 3050  
caaccctgag acggcagcga catctcaatg gcaaagtgtc ccctgagaaa 3100  
gaatcagggc cccgtcagat cctgcggagc ctggtccggc tgtctgtggc 3150  
tgccctcgcc gagcggaacc ccgtggagga gctcactgtg gattctcctc 3200  
ctgttcagca aatctcccag ctgctgtcct tgctgcatca gggccaattc 3250  
cagcccaaac caaaccaccg aggaaataag tacttgcca agccaggagg 3300  
cagcaggagt gcaatcccag acacagatgg cccaagtga agggctggag 3350  
gccagacaga cccagaacag gaggaagggc ctttgatcc tgaagaggac 3400  
ctctctgtga agcaactgct agaagaagag ctgtcaagtc tgctggacc 3450  
cagcacaggt ctggccctgg accggctgag cggccctgac ccggcctgga 3500  
tggcgagact ctctttgccc ctcaccacca actaccgtga caatgtgatc 3550  
tccccggatg ctgcagccac ggaggagccg aggaccttcc agacgttcgg 3600  
caaggcagag gcaccagagc tgagcccaac aggcacgagg ctggccagca 3650  
cctttgtctc ggagatgagc tcaactgctg agatgctgct ggaacagcgc 3700  
tccagcatgc ccgtggaggc cgcctccgag gcgctgcggc ggctctcgg 3750  
ctgcgggagg accctcagtt tagacttggc caccagtga gcctcaggca 3800  
tgaaagtga aggggaccca ggtggaaaga cggggactga gggcaagagc 3850  
agaggcagca gcagcagcag caggtgcctg tgaacatacc tcagacgcct 3900  
ctggatccaa gaaccagggg cctgaggatc tgtggacaag agctggtttc 3950  
taaaatcttg taactcacta gctagoggcg gcctgagaac tttagggtga 4000

ctgatgctac cccacagag gaggcaagag cccaggact aacagctgac 4050  
 tgaccaaagc agccccttgt aagcagctct gagtcttttg gaggacaggg 4100  
 acggtttgtg gctgagataa gtgtttcctg gcaaaacata tgtggagcac 4150  
 aaagggtcag tcctctggca gaacagatgc cacggagtat cacaggcagg 4200  
 aaagggtggc cttcttgggt agcaggagtc agggggctgt accctggggg 4250  
 tgccaggaaa tgctctctga cctatcaata aaggaaaagc agtaaaaaaa 4300  
 aaaaaaaaaa aaa 4313

<210> 425

<211> 1184

<212> PRT

<213> Homo sapiens

<400> 425

Met	Met	Gln	Leu	Leu	Gln	Leu	Leu	Leu	Gly	Leu	Leu	Gly	Pro	Gly	
1				5					10					15	
Gly	Tyr	Leu	Phe	Leu	Leu	Gly	Asp	Cys	Gln	Glu	Val	Thr	Thr	Leu	
				20					25					30	
Thr	Val	Lys	Tyr	Gln	Val	Ser	Glu	Glu	Val	Pro	Ser	Gly	Thr	Val	
				35					40					45	
Ile	Gly	Lys	Leu	Ser	Gln	Glu	Leu	Gly	Arg	Glu	Glu	Arg	Arg	Arg	
				50					55					60	
Gln	Ala	Gly	Ala	Ala	Phe	Gln	Val	Leu	Gln	Leu	Pro	Gln	Ala	Leu	
				65					70					75	
Pro	Ile	Gln	Val	Asp	Ser	Glu	Glu	Gly	Leu	Leu	Ser	Thr	Gly	Arg	
				80					85					90	
Arg	Leu	Asp	Arg	Glu	Gln	Leu	Cys	Arg	Gln	Trp	Asp	Pro	Cys	Leu	
				95					100					105	
Val	Ser	Phe	Asp	Val	Leu	Ala	Thr	Gly	Asp	Leu	Ala	Leu	Ile	His	
				110					115					120	
Val	Glu	Ile	Gln	Val	Leu	Asp	Ile	Asn	Asp	His	Gln	Pro	Arg	Phe	
				125					130					135	
Pro	Lys	Gly	Glu	Gln	Glu	Leu	Glu	Ile	Ser	Glu	Ser	Ala	Ser	Leu	
				140					145					150	
Arg	Thr	Arg	Ile	Pro	Leu	Asp	Arg	Ala	Leu	Asp	Pro	Asp	Thr	Gly	
				155					160					165	
Pro	Asn	Thr	Leu	His	Thr	Tyr	Thr	Leu	Ser	Pro	Ser	Glu	His	Phe	
				170					175					180	
Ala	Leu	Asp	Val	Ile	Val	Gly	Pro	Asp	Glu	Thr	Lys	His	Ala	Glu	
				185					190					195	

Leu Ile Val Val	Lys Glu Leu Asp Arg	Glu Ile His Ser Phe	Phe
	200	205	210
Asp Leu Val Leu	Thr Ala Tyr Asp Asn	Gly Asn Pro Pro Lys	Ser
	215	220	225
Gly Thr Ser Leu	Val Lys Val Asn Val	Leu Asp Ser Asn Asp	Asn
	230	235	240
Ser Pro Ala Phe	Ala Glu Ser Ser Leu	Ala Leu Glu Ile Gln	Glu
	245	250	255
Asp Ala Ala Pro	Gly Thr Leu Leu Ile	Lys Leu Thr Ala Thr	Asp
	260	265	270
Pro Asp Gln Gly	Pro Asn Gly Glu Val	Glu Phe Phe Leu Ser	Lys
	275	280	285
His Met Pro Pro	Glu Val Leu Asp Thr	Phe Ser Ile Asp Ala	Lys
	290	295	300
Thr Gly Gln Val	Ile Leu Arg Arg Pro	Leu Asp Tyr Glu Lys	Asn
	305	310	315
Pro Ala Tyr Glu	Val Asp Val Gln Ala	Arg Asp Leu Gly Pro	Asn
	320	325	330
Pro Ile Pro Ala	His Cys Lys Val Leu	Ile Lys Val Leu Asp	Val
	335	340	345
Asn Asp Asn Ile	Pro Ser Ile His Val	Thr Trp Ala Ser Gln	Pro
	350	355	360
Ser Leu Val Ser	Glu Ala Leu Pro Lys	Asp Ser Phe Ile Ala	Leu
	365	370	375
Val Met Ala Asp	Asp Leu Asp Ser Gly	His Asn Gly Leu Val	His
	380	385	390
Cys Trp Leu Ser	Gln Glu Leu Gly His	Phe Arg Leu Lys Arg	Thr
	395	400	405
Asn Gly Asn Thr	Tyr Met Leu Leu Thr	Asn Ala Thr Leu Asp	Arg
	410	415	420
Glu Gln Trp Pro	Lys Tyr Thr Leu Thr	Leu Leu Ala Gln Asp	Gln
	425	430	435
Gly Leu Gln Pro	Leu Ser Ala Lys Lys	Gln Leu Ser Ile Gln	Ile
	440	445	450
Ser Asp Ile Asn	Asp Asn Ala Pro Val	Phe Glu Lys Ser Arg	Tyr
	455	460	465
Glu Val Ser Thr	Arg Glu Asn Asn Leu	Pro Ser Leu His Leu	Ile
	470	475	480
Thr Ile Lys Ala	His Asp Ala Asp Leu	Gly Ile Asn Gly Lys	Val

485										490					495				
Ser	Tyr	Arg	Ile	Gln	Asp	Ser	Pro	Val	Ala	His	Leu	Val	Ala	Ile					
				500					505					510					
Asp	Ser	Asn	Thr	Gly	Glu	Val	Thr	Ala	Gln	Arg	Ser	Leu	Asn	Tyr					
				515					520					525					
Glu	Glu	Met	Ala	Gly	Phe	Glu	Phe	Gln	Val	Ile	Ala	Glu	Asp	Ser					
				530					535					540					
Gly	Gln	Pro	Met	Leu	Ala	Ser	Ser	Val	Ser	Val	Trp	Val	Ser	Leu					
				545					550					555					
Leu	Asp	Ala	Asn	Asp	Asn	Ala	Pro	Glu	Val	Val	Gln	Pro	Val	Leu					
				560					565					570					
Ser	Asp	Gly	Lys	Ala	Ser	Leu	Ser	Val	Leu	Val	Asn	Ala	Ser	Thr					
				575					580					585					
Gly	His	Leu	Leu	Val	Pro	Ile	Glu	Thr	Pro	Asn	Gly	Leu	Gly	Pro					
				590					595					600					
Ala	Gly	Thr	Asp	Thr	Pro	Pro	Leu	Ala	Thr	His	Ser	Ser	Arg	Pro					
				605					610					615					
Phe	Leu	Leu	Thr	Thr	Ile	Val	Ala	Arg	Asp	Ala	Asp	Ser	Gly	Ala					
				620					625					630					
Asn	Gly	Glu	Pro	Leu	Tyr	Ser	Ile	Arg	Asn	Gly	Asn	Glu	Ala	His					
				635					640					645					
Leu	Phe	Ile	Leu	Asn	Pro	His	Thr	Gly	Gln	Leu	Phe	Val	Asn	Val					
				650					655					660					
Thr	Asn	Ala	Ser	Ser	Leu	Ile	Gly	Ser	Glu	Trp	Glu	Leu	Glu	Ile					
				665					670					675					
Val	Val	Glu	Asp	Gln	Gly	Ser	Pro	Pro	Leu	Gln	Thr	Arg	Ala	Leu					
				680					685					690					
Leu	Arg	Val	Met	Phe	Val	Thr	Ser	Val	Asp	His	Leu	Arg	Asp	Ser					
				695					700					705					
Ala	Arg	Lys	Pro	Gly	Ala	Leu	Ser	Met	Ser	Met	Leu	Thr	Val	Ile					
				710					715					720					
Cys	Leu	Ala	Val	Leu	Leu	Gly	Ile	Phe	Gly	Leu	Ile	Leu	Ala	Leu					
				725					730					735					
Phe	Met	Ser	Ile	Cys	Arg	Thr	Glu	Lys	Lys	Asp	Asn	Arg	Ala	Tyr					
				740					745					750					
Asn	Cys	Arg	Glu	Ala	Glu	Ser	Thr	Tyr	Arg	Gln	Gln	Pro	Lys	Arg					
				755					760					765					
Pro	Gln	Lys	His	Ile	Gln	Lys	Ala	Asp	Ile	His	Leu	Val	Pro	Val					
				770					775					780					

Leu Arg Gly Gln	Ala Gly Glu Pro Cys	Glu Val Gly Gln Ser His
785	790	795
Lys Asp Val Asp	Lys Glu Ala Met Met	Glu Ala Gly Trp Asp Pro
800	805	810
Cys Leu Gln Ala	Pro Phe His Leu Thr	Pro Thr Leu Tyr Arg Thr
815	820	825
Leu Arg Asn Gln	Gly Asn Gln Gly Ala	Pro Ala Glu Ser Arg Glu
830	835	840
Val Leu Gln Asp	Thr Val Asn Leu Leu	Phe Asn His Pro Arg Gln
845	850	855
Arg Asn Ala Ser	Arg Glu Asn Leu Asn	Leu Pro Glu Pro Gln Pro
860	865	870
Ala Thr Gly Gln	Pro Arg Ser Arg Pro	Leu Lys Val Ala Gly Ser
875	880	885
Pro Thr Gly Arg	Leu Ala Gly Asp Gln	Gly Ser Glu Glu Ala Pro
890	895	900
Gln Arg Pro Pro	Ala Ser Ser Ala Thr	Leu Arg Arg Gln Arg His
905	910	915
Leu Asn Gly Lys	Val Ser Pro Glu Lys	Glu Ser Gly Pro Arg Gln
920	925	930
Ile Leu Arg Ser	Leu Val Arg Leu Ser	Val Ala Ala Phe Ala Glu
935	940	945
Arg Asn Pro Val	Glu Glu Leu Thr Val	Asp Ser Pro Pro Val Gln
950	955	960
Gln Ile Ser Gln	Leu Leu Ser Leu Leu	His Gln Gly Gln Phe Gln
965	970	975
Pro Lys Pro Asn	His Arg Gly Asn Lys	Tyr Leu Ala Lys Pro Gly
980	985	990
Gly Ser Arg Ser	Ala Ile Pro Asp Thr	Asp Gly Pro Ser Ala Arg
995	1000	1005
Ala Gly Gly Gln	Thr Asp Pro Glu Gln	Glu Glu Gly Pro Leu Asp
1010	1015	1020
Pro Glu Glu Asp	Leu Ser Val Lys Gln	Leu Leu Glu Glu Glu Leu
1025	1030	1035
Ser Ser Leu Leu	Asp Pro Ser Thr Gly	Leu Ala Leu Asp Arg Leu
1040	1045	1050
Ser Ala Pro Asp	Pro Ala Trp Met Ala	Arg Leu Ser Leu Pro Leu
1055	1060	1065
Thr Thr Asn Tyr	Arg Asp Asn Val Ile	Ser Pro Asp Ala Ala Ala



1070	1075	1080
Thr Glu Glu Pro Arg Thr Phe Gln Thr Phe Gly Lys Ala Glu Ala		
1085	1090	1095
Pro Glu Leu Ser Pro Thr Gly Thr Arg Leu Ala Ser Thr Phe Val		
1100	1105	1110
Ser Glu Met Ser Ser Leu Leu Glu Met Leu Leu Glu Gln Arg Ser		
1115	1120	1125
Ser Met Pro Val Glu Ala Ala Ser Glu Ala Leu Arg Arg Leu Ser		
1130	1135	1140
Val Cys Gly Arg Thr Leu Ser Leu Asp Leu Ala Thr Ser Ala Ala		
1145	1150	1155
Ser Gly Met Lys Val Gln Gly Asp Pro Gly Gly Lys Thr Gly Thr		
1160	1165	1170
Glu Gly Lys Ser Arg Gly Ser Ser Ser Ser Ser Arg Cys Leu		
1175	1180	

<210> 426  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 426  
 gtaagcacat gcctccagag gtgc 24

<210> 427  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 427  
 gtgacgtgga tgcttgggat gttg 24

<210> 428  
 <211> 50  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 428  
 tggacacctt cagtattgat gccaaagacag gccaggtcat tctgcgtcga 50

<210> 429  
 <211> 2037

<212> DNA

<213> Homo sapiens

<400> 429

cggacgcgtg ggcggacgcg tgggggagag ccgcagtccc ggctgcagca 50  
cctgggagaa ggcagaccgt gtgagggggc ctgtggcccc agcgtgctgt 100  
ggcctcgggg agtggaagt ggaggcagga gccttcctta cacttcgcca 150  
tgagtctcct catcgactcc agcatcatga ttacctcca gatactatct 200  
tttgattttg ggtggctttt cttcatgcgc caattgttta aagactatga 250  
gatacgtcag tatgttgtac aggtgatctt ctccgtgacg tttgcatttt 300  
cttgacccat gtttgagctc atcatctttg aaatcttagg agtattgaat 350  
agcagctccc gttattttca ctggaaaatg aacctgtgtg taattctgct 400  
gatcctgggt ttcattgtgc ctttttacat tggctatttt attgtgagca 450  
atatccgact actgcataaa caacgactgc ttttttcctg tctcttatgg 500  
ctgaccttta tgtatttctt ctggaaacta ggagatccct ttcccattct 550  
cagcccaaaa catgggatct tatocataga acagctcatc agccgggttg 600  
gtgtgattgg agtgactctc atggctcttc tttctggatt tgggtgctgtc 650  
aactgcccat acacttacat gtcttacttc ctccaggaatg tgactgacac 700  
ggatattcta gccctggaac ggcgactgct gcaaaccatg gatatgatca 750  
taagcaaaaa gaaaaggatg gcaatggcac ggagaacaat gttccagaag 800  
ggggaagtgc ataacaaacc atcaggtttc tggggaatga taaaaagtgt 850  
taccacttca gcatcaggaa gtgaaaatct tactcttatt caacaggaag 900  
tggatgcttt ggaagaatta agcaggcagc tttttctgga aacagctgat 950  
ctatatgcta ccaaggagag aatagaatac tccaaaacct tcaaggggaa 1000  
atattttaat tttcttggtt actttttctc tatttactgt gtttgaaaa 1050  
ttttcatggc taccatcaat attgtttttg atcgagttgg gaaaacggat 1100  
cctgtcacia gaggcattga gatcactgtg aattatctgg gaatccaatt 1150  
tgatgtgaag ttttgggtccc aacacatttc cttcattctt gttggaataa 1200  
tcacgtcac atccatcaga ggattgctga tcaactctac caagttcttt 1250  
tatgccatct ctagcagtaa gtccctccat gtcattgtcc tgctattagc 1300  
acagataatg ggcatgtact ttgtctctc tgtgctgctg atccgaatga 1350

gtatgccttt agaataccgc accataatca ctgaagtcct tggagaactg 1400  
 cagttcaact tctatcaccg ttggtttgat gtgatcttcc tggtcagcgc 1450  
 tctototagc atactcttcc tctatttggc tcacaaacag gcaccagaga 1500  
 agcaaatggc accttgaact taagcctact acagactgtt agaggccagt 1550  
 ggtttcaaaa tttagatata agagggggga aaaatggaac cagggcctga 1600  
 cattttataa acaaacaaaa tgctatggta gcatttttca ccttcatagc 1650  
 atactccttc cccgtcaggt gatactatga ccatgagtag catcagccag 1700  
 aacatgagag ggagaactaa ctcaagacaa tactcagcag agagcatccc 1750  
 gtgtggatat gaggctggtg tagaggcgga gaggagccaa gaaactaaag 1800  
 gtgaaaaata cactggaact ctggggcaag acatgtctat ggtagctgag 1850  
 ccaaacacgt aggatttccg ttttaagggt cacatggaaa aggttatagc 1900  
 ttgacctga gattgactca ttaaaatcag agactgtaac aaaaaaaaaa 1950  
 aaaaaaaaaa agggcgccgc cgactctaga gtcgacctgc agaagcttgg 2000  
 ccgccatggc ccaacttggt tattgcagct tataatg 2037

<210> 430

<211> 455

<212> PRT

<213> Homo sapiens

<400> 430

Met	Ser	Phe	Leu	Ile	Asp	Ser	Ser	Ile	Met	Ile	Thr	Ser	Gln	Ile
1				5					10					15
Leu	Phe	Phe	Gly	Phe	Gly	Trp	Leu	Phe	Phe	Met	Arg	Gln	Leu	Phe
				20					25					30
Lys	Asp	Tyr	Glu	Ile	Arg	Gln	Tyr	Val	Val	Gln	Val	Ile	Phe	Ser
				35					40					45
Val	Thr	Phe	Ala	Phe	Ser	Cys	Thr	Met	Phe	Glu	Leu	Ile	Ile	Phe
				50					55					60
Glu	Ile	Leu	Gly	Val	Leu	Asn	Ser	Ser	Ser	Arg	Tyr	Phe	His	Trp
				65					70					75
Lys	Met	Asn	Leu	Cys	Val	Ile	Leu	Leu	Ile	Leu	Val	Phe	Met	Val
				80					85					90
Pro	Phe	Tyr	Ile	Gly	Tyr	Phe	Ile	Val	Ser	Asn	Ile	Arg	Leu	Leu
				95					100					105
His	Lys	Gln	Arg	Leu	Leu	Phe	Ser	Cys	Leu	Leu	Trp	Leu	Thr	Phe
				110					115					120

Met	Tyr	Phe	Phe	Trp	Lys	Leu	Gly	Asp	Pro	Phe	Pro	Ile	Leu	Ser	125	130	135
Pro	Lys	His	Gly	Ile	Leu	Ser	Ile	Glu	Gln	Leu	Ile	Ser	Arg	Val	140	145	150
Gly	Val	Ile	Gly	Val	Thr	Leu	Met	Ala	Leu	Leu	Ser	Gly	Phe	Gly	155	160	165
Ala	Val	Asn	Cys	Pro	Tyr	Thr	Tyr	Met	Ser	Tyr	Phe	Leu	Arg	Asn	170	175	180
Val	Thr	Asp	Thr	Asp	Ile	Leu	Ala	Leu	Glu	Arg	Arg	Leu	Leu	Gln	185	190	195
Thr	Met	Asp	Met	Ile	Ile	Ser	Lys	Lys	Lys	Arg	Met	Ala	Met	Ala	200	205	210
Arg	Arg	Thr	Met	Phe	Gln	Lys	Gly	Glu	Val	His	Asn	Lys	Pro	Ser	215	220	225
Gly	Phe	Trp	Gly	Met	Ile	Lys	Ser	Val	Thr	Thr	Ser	Ala	Ser	Gly	230	235	240
Ser	Glu	Asn	Leu	Thr	Leu	Ile	Gln	Gln	Glu	Val	Asp	Ala	Leu	Glu	245	250	255
Glu	Leu	Ser	Arg	Gln	Leu	Phe	Leu	Glu	Thr	Ala	Asp	Leu	Tyr	Ala	260	265	270
Thr	Lys	Glu	Arg	Ile	Glu	Tyr	Ser	Lys	Thr	Phe	Lys	Gly	Lys	Tyr	275	280	285
Phe	Asn	Phe	Leu	Gly	Tyr	Phe	Phe	Ser	Ile	Tyr	Cys	Val	Trp	Lys	290	295	300
Ile	Phe	Met	Ala	Thr	Ile	Asn	Ile	Val	Phe	Asp	Arg	Val	Gly	Lys	305	310	315
Thr	Asp	Pro	Val	Thr	Arg	Gly	Ile	Glu	Ile	Thr	Val	Asn	Tyr	Leu	320	325	330
Gly	Ile	Gln	Phe	Asp	Val	Lys	Phe	Trp	Ser	Gln	His	Ile	Ser	Phe	335	340	345
Ile	Leu	Val	Gly	Ile	Ile	Ile	Val	Thr	Ser	Ile	Arg	Gly	Leu	Leu	350	355	360
Ile	Thr	Leu	Thr	Lys	Phe	Phe	Tyr	Ala	Ile	Ser	Ser	Ser	Lys	Ser	365	370	375
Ser	Asn	Val	Ile	Val	Leu	Leu	Leu	Ala	Gln	Ile	Met	Gly	Met	Tyr	380	385	390
Phe	Val	Ser	Ser	Val	Leu	Leu	Ile	Arg	Met	Ser	Met	Pro	Leu	Glu	395	400	405
Tyr	Arg	Thr	Ile	Ile	Thr	Glu	Val	Leu	Gly	Glu	Leu	Gln	Phe	Asn			

410	415	420
Phe Tyr His Arg Trp Phe Asp Val Ile	Phe Leu Val Ser Ala	Leu
425	430	435
Ser Ser Ile Leu Phe Leu Tyr Leu Ala	His Lys Gln Ala Pro	Glu
440	445	450
Lys Gln Met Ala Pro		
455		

<210> 431  
 <211> 407  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 78, 81, 113, 157, 224, 297  
 <223> unknown base

<400> 431  
 catgggaagt ggagccggag ccttccttac actcgccatg agtttcctca 50  
 tcgactocag catcatgatt acctcccnga nactatTTTT tggatttggg 100  
 tggcttttct tcngcgccaa tgtttaaaga ctatgagata cgtcagtatg 150  
 ttgtacnggt gatcttctcc gtgacgtttg ccatttcttg caccatgttt 200  
 gagctcatca tctttgaaat cttinggagta ttgaatagca gctcccgta 250  
 ttttactgg aaaatgaacc tgtgtgtaat tctgctgac ctggttntca 300  
 tggtgccctt ttacattggc tattttattg tgagcaatat ccgactactg 350  
 cataaacaac gactgctttt ttcctgtctc ttatggctga cctttatgta 400  
 tttccag 407

<210> 432  
 <211> 457  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 31, 66, 81-82, 84, 122, 184, 187, 232, 241, 400, 424, 427, 434  
 <223> unknown base

<400> 432  
 gtgttgccct tggggagggg aaggggagcc nggccctttc ctaaaatttg 50  
 gccaaagggt tctttnttga attccgggt nngnatacct tcccagaaaa 100  
 tatttttttg atttgggta gntttttttc atgcgccaat tgtttaaaga 150  
 ctatgagata cgtcagtatg ttgtacaggt gatnttntcc gtgacgtttg 200

cattttcttg caccatgttt gagctcatca tntttgaaat nttaggagta 250  
 ttgaatagca gctcccgtta ttttactgg aaaatgaacc tgtgtgtaat 300  
 totgtgatc ctggttttca tgggtgccttt ttacattggc tattttattg 350  
 tgagcaatat ccgactactg cataaacaac gactgctttt ttcctgtctn 400  
 ttatggctga cctttatgta tttntnttgg aaantaggag atccctttcc 450  
 cattctc 457

<210> 433  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 433  
 aagtggagcc ggagccttcc 20

<210> 434  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 434  
 tcgttggtta tgcagtagtc gg 22

<210> 435  
 <211> 41  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 435  
 attgtttaaa gactatgaga tacgtcagta tgttgtagag g 41

<210> 436  
 <211> 3951  
 <212> DNA  
 <213> Homo sapiens

<400> 436  
 ctcgcgcagg gatcgtccca tggccggggc tcggagccgc gacccttggg 50  
 gggcctccgg gatttgctac ctttttgggt ccctgctcgt cgaactgctc 100  
 ttctcacggg ctgtgcctt caatctggac gtgatgggtg cttgacgcaa 150  
 ggagggcgag ccaggcagcc tcttcggctt ctctgtggcc ctgcaccggc 200

agttgcagcc cgcacccag agctggctgc tgggtgggtgc tccccaggcc 250  
 ctggctcttc ctgggcagca ggcgaatcgc actggaggcc tcttcgcttg 300  
 cccgttgagc ctggaggaga ctgactgcta cagagtggac atcgaccagg 350  
 gagctgatat gcaaaaggaa agcaaggaga accagtgggtt gggagtcaat 400  
 gttcggagcc aggggcctgg gggcaagatt gttacctgtg cacaccgata 450  
 tgaggcaagg cagcgagtgg accagatcct ggagacgcgg gatatgattg 500  
 gtgcgtgctt tgtgctcagc caggacctgg ccatccggga tgagttggat 550  
 ggtggggaat ggaagttctg tgaggagcgc cccaaggcc atgaacaatt 600  
 tgggttctgc cagcagggca cagctgccgc cttctcccct gatagccact 650  
 acctcctctt tggggcccca ggaacctata attggaaggg cacggccagg 700  
 gtggagctct gtgcacaggg ctgacggac ctggcacacc tggacgacgg 750  
 tccctacgag ggggggggag agaaggagca ggacccccgc ctcacccgg 800  
 tccctgcaa cagctacttt ggcttctcta ttgactcggg gaaaggtctg 850  
 gtgcgtgcag aagagctgag ctttgtggct ggagcccccc gcgccaacca 900  
 caagggtgct gtggtcatcc tgcgcaagga cagcgccagt cgcctggtgc 950  
 ccgaggttat gctgtctggg gagcgctga cctccggctt tggctactca 1000  
 ctggctgtgg ctgacctcaa cagtgatggc tggccagacc tgatagtggg 1050  
 tgccccctac ttctttgagc gccagaaga gctgggggggt gctgtgtatg 1100  
 tgtacttgaa ccaggggggt cactgggctg ggatctcccc tctccggctc 1150  
 tgcggctccc ctgactccat gttcgggatc agcctggctg tcctggggga 1200  
 cctcaaccaa gatggctttc cagatattgc agtgggtgcc ccctttgatg 1250  
 gtgatgggaa agtcttcac taccatggga gcagcctggg ggttgtcgcc 1300  
 aaaccttcac aggtgctgga gggcgaggct gtgggcatca agagcttcgg 1350  
 ctactccctg tcaggcagct tggatatgga tgggaaccaa taccctgacc 1400  
 tgctgggtgg ctccctggct gacaccgag tgctcttcag ggccagaccc 1450  
 atcctccatg tctcccatga ggtctctatt gctccacgaa gcatcgacct 1500  
 ggagcagccc aactgtgctg ggggccactc ggtctgtgtg gacctaggg 1550  
 tctgtttcag ctacattgca gtccccagca gctatagccc tactgtggcc 1600  
 ctggactatg tgttagatgc ggacacagac cggaggctcc ggggccagg 1650

tccccgtgtg acgtttcctga gccgtaacct ggaagaaccc aagcaccagg 1700  
 cctcggggcac cgtgtggctg aagcaccagc atgaccgagt ctgtggagac 1750  
 gccatgttcc agctccagga aaatgtcaaa gacaagcttc gggccattgt 1800  
 agtgaccttg tcctacagtc tccagacccc tcggctccgg cgacaggctc 1850  
 ctggccaggg gctgcctcca gtggccccc tctcaatgc ccaccagccc 1900  
 agcaccacgc gggcagagat ccacttcctg aagcaaggct gtggtgaaga 1950  
 caagatctgc cagagcaatc tgcagctggc ccacgcccgc ttctgtacct 2000  
 gggtcagcga cacggaattc caacctctgc ccatggatgt ggatggaaca 2050  
 acagccctgt ttgcactgag tgggcagcca gtcattggcc tggagctgat 2100  
 ggtcaccaac ctgccatcg acccagccca gcccaggct gatggggatg 2150  
 atgcccataga agcccagctc ctggctcatgc ttctgactc actgcactac 2200  
 tcaggggtcc gggccctgga ccctgcggag aagccactct gcctgtccaa 2250  
 tgagaatgcc tcccatgttg agtgtgagct ggggaacccc atgaagagag 2300  
 gtgcccaggc caccttctac ctcatcctta gcacctccgg gatcagcatt 2350  
 gagaccacgg aactggaggt agagctgctg ttggccacga tcagttagca 2400  
 ggagctgcat ccagtctctg cagcagcccg tgtcttcatt gagctgccac 2450  
 tgtccattgc aggaatggcc attccccagc aactcttctt ctctggtgtg 2500  
 gtgaggggag agagagccat gcagtctgag cgggatgtgg gcagcaaggc 2550  
 caagtatgag gtcacggttt ccaaccaagg ccagtcgctc agaaccctgg 2600  
 gctctgcctt cctcaacatc atgtggcctc atgagattgc caatgggaag 2650  
 tggttgctgt acccaatgca ggttgagctg gagggcgggc aggggcctgg 2700  
 gcagaaaggg ctttgcctc ccaggcccaa catcctccac ctggatgtgg 2750  
 acagtaggga taggaggcgg cgggagctgg agccacctga gcagcaggag 2800  
 cctggtgagc ggcaggagcc cagcatgtcc tgggtggccag tgtcctctgc 2850  
 tgagaagaag aaaaacatca ccctggactg cggccggggc acggccaact 2900  
 gtgtggtgtt cagctgccc cctacagct ttgaccgccc ggctgtgctg 2950  
 catgtctggg gccgtctctg gaacagcacc tttctggagg agtactcagc 3000  
 tgtgaagtcc ctggaagtga ttgtccgggc caacatcaca gtgaagtcct 3050  
 ccataaagaa cttgatgctc cgagatgcct ccacagtgat ccagtgatg 3100



gtatacttgg accccatggc tgtggtggca gaaggagtgc cctggtgggt 3150  
 catcctcctg gctgtactgg ctgggctgct ggtgctagca ctgctggtgc 3200  
 tgctcctgtg gaagatggga ttcttcaaac gggcgaagca ccccgaggcc 3250  
 accgtgcccc agtaccatgc ggtgaagatt cctcgggaag accgacagca 3300  
 gttcaaggag gagaagacgg gcaccatcct gaggaacaac tggggcagcc 3350  
 cccggcggga gggcccgat gcacacccca tcctggctgc tgacgggcat 3400  
 cccgagctgg gccccgatgg gcatccaggg ccaggcaccg cctaggttcc 3450  
 catgtcccag cctggcctgt ggctgccctc catcccttcc ccagagatgg 3500  
 ctccttggga tgaagagggt agagtgggct gctggtgtcg catcaagatt 3550  
 tggcaggatc ggcttctca ggggcacaga cctctccac ccacaagaac 3600  
 tcctcccacc caacttcccc ttagagtgtc gtgagatgag agtgggtaaa 3650  
 tcagggacag ggccatgggg tagggtgaga agggcagggg tgcctgatg 3700  
 caaagggtggg gagaaggat cctaatecct tcctctccca ttcaccctgt 3750  
 gtaacaggac cccaaggacc tgcctccccg gaagtgcctt aacctagagg 3800  
 gtgggggagg aggttgtgtc actgactcag gctgctcctt ctctagtttc 3850  
 ccctctcadc tgaccttagt ttgctgccat cagtctagtg gtttcgtggt 3900  
 ttogtctatt tattaataaaa tatttgagaa caaaaaaaaaa aaaaaaaaaa 3950

a 3951

<210> 437

<211> 1141

<212> PRT

<213> Homo sapiens

<400> 437

Met	Ala	Gly	Ala	Arg	Ser	Arg	Asp	Pro	Trp	Gly	Ala	Ser	Gly	Ile
1				5					10					15

Cys	Tyr	Leu	Phe	Gly	Ser	Leu	Leu	Val	Glu	Leu	Leu	Phe	Ser	Arg
				20					25					30

Ala	Val	Ala	Phe	Asn	Leu	Asp	Val	Met	Gly	Ala	Leu	Arg	Lys	Glu
				35					40					45

Gly	Glu	Pro	Gly	Ser	Leu	Phe	Gly	Phe	Ser	Val	Ala	Leu	His	Arg
				50					55					60

Gln	Leu	Gln	Pro	Arg	Pro	Gln	Ser	Trp	Leu	Leu	Val	Gly	Ala	Pro
				65					70					75

Gln	Ala	Leu	Ala	Leu	Pro	Gly	Gln	Gln	Ala	Asn	Arg	Thr	Gly	Gly
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

80										85					90				
Leu	Phe	Ala	Cys	Pro	Leu	Ser	Leu	Glu	Glu	Thr	Asp	Cys	Tyr	Arg					
				95					100					105					
Val	Asp	Ile	Asp	Gln	Gly	Ala	Asp	Met	Gln	Lys	Glu	Ser	Lys	Glu					
				110					115					120					
Asn	Gln	Trp	Leu	Gly	Val	Ser	Val	Arg	Ser	Gln	Gly	Pro	Gly	Gly					
				125					130					135					
Lys	Ile	Val	Thr	Cys	Ala	His	Arg	Tyr	Glu	Ala	Arg	Gln	Arg	Val					
				140					145					150					
Asp	Gln	Ile	Leu	Glu	Thr	Arg	Asp	Met	Ile	Gly	Arg	Cys	Phe	Val					
				155					160					165					
Leu	Ser	Gln	Asp	Leu	Ala	Ile	Arg	Asp	Glu	Leu	Asp	Gly	Gly	Glu					
				170					175					180					
Trp	Lys	Phe	Cys	Glu	Gly	Arg	Pro	Gln	Gly	His	Glu	Gln	Phe	Gly					
				185					190					195					
Phe	Cys	Gln	Gln	Gly	Thr	Ala	Ala	Ala	Phe	Ser	Pro	Asp	Ser	His					
				200					205					210					
Tyr	Leu	Leu	Phe	Gly	Ala	Pro	Gly	Thr	Tyr	Asn	Trp	Lys	Gly	Thr					
				215					220					225					
Ala	Arg	Val	Glu	Leu	Cys	Ala	Gln	Gly	Ser	Ala	Asp	Leu	Ala	His					
				230					235					240					
Leu	Asp	Asp	Gly	Pro	Tyr	Glu	Ala	Gly	Gly	Glu	Lys	Glu	Gln	Asp					
				245					250					255					
Pro	Arg	Leu	Ile	Pro	Val	Pro	Ala	Asn	Ser	Tyr	Phe	Gly	Phe	Ser					
				260					265					270					
Ile	Asp	Ser	Gly	Lys	Gly	Leu	Val	Arg	Ala	Glu	Glu	Leu	Ser	Phe					
				275					280					285					
Val	Ala	Gly	Ala	Pro	Arg	Ala	Asn	His	Lys	Gly	Ala	Val	Val	Ile					
				290					295					300					
Leu	Arg	Lys	Asp	Ser	Ala	Ser	Arg	Leu	Val	Pro	Glu	Val	Met	Leu					
				305					310					315					
Ser	Gly	Glu	Arg	Leu	Thr	Ser	Gly	Phe	Gly	Tyr	Ser	Leu	Ala	Val					
				320					325					330					
Ala	Asp	Leu	Asn	Ser	Asp	Gly	Trp	Pro	Asp	Leu	Ile	Val	Gly	Ala					
				335					340					345					
Pro	Tyr	Phe	Phe	Glu	Arg	Gln	Glu	Glu	Leu	Gly	Gly	Ala	Val	Tyr					
				350					355					360					
Val	Tyr	Leu	Asn	Gln	Gly	Gly	His	Trp	Ala	Gly	Ile	Ser	Pro	Leu					
				365					370					375					

Arg	Leu	Cys	Gly	Ser	Pro	Asp	Ser	Met	Phe	Gly	Ile	Ser	Leu	Ala	380	385	390
Val	Leu	Gly	Asp	Leu	Asn	Gln	Asp	Gly	Phe	Pro	Asp	Ile	Ala	Val	395	400	405
Gly	Ala	Pro	Phe	Asp	Gly	Asp	Gly	Lys	Val	Phe	Ile	Tyr	His	Gly	410	415	420
Ser	Ser	Leu	Gly	Val	Val	Ala	Lys	Pro	Ser	Gln	Val	Leu	Glu	Gly	425	430	435
Glu	Ala	Val	Gly	Ile	Lys	Ser	Phe	Gly	Tyr	Ser	Leu	Ser	Gly	Ser	440	445	450
Leu	Asp	Met	Asp	Gly	Asn	Gln	Tyr	Pro	Asp	Leu	Leu	Val	Gly	Ser	455	460	465
Leu	Ala	Asp	Thr	Ala	Val	Leu	Phe	Arg	Ala	Arg	Pro	Ile	Leu	His	470	475	480
Val	Ser	His	Glu	Val	Ser	Ile	Ala	Pro	Arg	Ser	Ile	Asp	Leu	Glu	485	490	495
Gln	Pro	Asn	Cys	Ala	Gly	Gly	His	Ser	Val	Cys	Val	Asp	Leu	Arg	500	505	510
Val	Cys	Phe	Ser	Tyr	Ile	Ala	Val	Pro	Ser	Ser	Tyr	Ser	Pro	Thr	515	520	525
Val	Ala	Leu	Asp	Tyr	Val	Leu	Asp	Ala	Asp	Thr	Asp	Arg	Arg	Leu	530	535	540
Arg	Gly	Gln	Val	Pro	Arg	Val	Thr	Phe	Leu	Ser	Arg	Asn	Leu	Glu	545	550	555
Glu	Pro	Lys	His	Gln	Ala	Ser	Gly	Thr	Val	Trp	Leu	Lys	His	Gln	560	565	570
His	Asp	Arg	Val	Cys	Gly	Asp	Ala	Met	Phe	Gln	Leu	Gln	Glu	Asn	575	580	585
Val	Lys	Asp	Lys	Leu	Arg	Ala	Ile	Val	Val	Thr	Leu	Ser	Tyr	Ser	590	595	600
Leu	Gln	Thr	Pro	Arg	Leu	Arg	Arg	Gln	Ala	Pro	Gly	Gln	Gly	Leu	605	610	615
Pro	Pro	Val	Ala	Pro	Ile	Leu	Asn	Ala	His	Gln	Pro	Ser	Thr	Gln	620	625	630
Arg	Ala	Glu	Ile	His	Phe	Leu	Lys	Gln	Gly	Cys	Gly	Glu	Asp	Lys	635	640	645
Ile	Cys	Gln	Ser	Asn	Leu	Gln	Leu	Val	His	Ala	Arg	Phe	Cys	Thr	650	655	660
Arg	Val	Ser	Asp	Thr	Glu	Phe	Gln	Pro	Leu	Pro	Met	Asp	Val	Asp			

665										670					675				
Gly	Thr	Thr	Ala	Leu	Phe	Ala	Leu	Ser	Gly	Gln	Pro	Val	Ile	Gly					
				680					685					690					
Leu	Glu	Leu	Met	Val	Thr	Asn	Leu	Pro	Ser	Asp	Pro	Ala	Gln	Pro					
				695					700					705					
Gln	Ala	Asp	Gly	Asp	Asp	Ala	His	Glu	Ala	Gln	Leu	Leu	Val	Met					
				710					715					720					
Leu	Pro	Asp	Ser	Leu	His	Tyr	Ser	Gly	Val	Arg	Ala	Leu	Asp	Pro					
				725					730					735					
Ala	Glu	Lys	Pro	Leu	Cys	Leu	Ser	Asn	Glu	Asn	Ala	Ser	His	Val					
				740					745					750					
Glu	Cys	Glu	Leu	Gly	Asn	Pro	Met	Lys	Arg	Gly	Ala	Gln	Val	Thr					
				755					760					765					
Phe	Tyr	Leu	Ile	Leu	Ser	Thr	Ser	Gly	Ile	Ser	Ile	Glu	Thr	Thr					
				770					775					780					
Glu	Leu	Glu	Val	Glu	Leu	Leu	Leu	Ala	Thr	Ile	Ser	Glu	Gln	Glu					
				785					790					795					
Leu	His	Pro	Val	Ser	Ala	Arg	Ala	Arg	Val	Phe	Ile	Glu	Leu	Pro					
				800					805					810					
Leu	Ser	Ile	Ala	Gly	Met	Ala	Ile	Pro	Gln	Gln	Leu	Phe	Phe	Ser					
				815					820					825					
Gly	Val	Val	Arg	Gly	Glu	Arg	Ala	Met	Gln	Ser	Glu	Arg	Asp	Val					
				830					835					840					
Gly	Ser	Lys	Val	Lys	Tyr	Glu	Val	Thr	Val	Ser	Asn	Gln	Gly	Gln					
				845					850					855					
Ser	Leu	Arg	Thr	Leu	Gly	Ser	Ala	Phe	Leu	Asn	Ile	Met	Trp	Pro					
				860					865					870					
His	Glu	Ile	Ala	Asn	Gly	Lys	Trp	Leu	Leu	Tyr	Pro	Met	Gln	Val					
				875					880					885					
Glu	Leu	Glu	Gly	Gly	Gln	Gly	Pro	Gly	Gln	Lys	Gly	Leu	Cys	Ser					
				890					895					900					
Pro	Arg	Pro	Asn	Ile	Leu	His	Leu	Asp	Val	Asp	Ser	Arg	Asp	Arg					
				905					910					915					
Arg	Arg	Arg	Glu	Leu	Glu	Pro	Pro	Glu	Gln	Gln	Glu	Pro	Gly	Glu					
				920					925					930					
Arg	Gln	Glu	Pro	Ser	Met	Ser	Trp	Trp	Pro	Val	Ser	Ser	Ala	Glu					
				935					940					945					
Lys	Lys	Lys	Asn	Ile	Thr	Leu	Asp	Cys	Ala	Arg	Gly	Thr	Ala	Asn					
				950					955					960					

Cys Val Val Phe Ser Cys Pro Leu Tyr Ser Phe Asp Arg Ala Ala	965	970	975
Val Leu His Val Trp Gly Arg Leu Trp Asn Ser Thr Phe Leu Glu	980	985	990
Glu Tyr Ser Ala Val Lys Ser Leu Glu Val Ile Val Arg Ala Asn	995	1000	1005
Ile Thr Val Lys Ser Ser Ile Lys Asn Leu Met Leu Arg Asp Ala	1010	1015	1020
Ser Thr Val Ile Pro Val Met Val Tyr Leu Asp Pro Met Ala Val	1025	1030	1035
Val Ala Glu Gly Val Pro Trp Trp Val Ile Leu Leu Ala Val Leu	1040	1045	1050
Ala Gly Leu Leu Val Leu Ala Leu Leu Val Leu Leu Leu Trp Lys	1055	1060	1065
Met Gly Phe Phe Lys Arg Ala Lys His Pro Glu Ala Thr Val Pro	1070	1075	1080
Gln Tyr His Ala Val Lys Ile Pro Arg Glu Asp Arg Gln Gln Phe	1085	1090	1095
Lys Glu Glu Lys Thr Gly Thr Ile Leu Arg Asn Asn Trp Gly Ser	1100	1105	1110
Pro Arg Arg Glu Gly Pro Asp Ala His Pro Ile Leu Ala Ala Asp	1115	1120	1125
Gly His Pro Glu Leu Gly Pro Asp Gly His Pro Gly Pro Gly Thr	1130	1135	1140

Ala

<210> 438

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 438

ggctgacacc gcagtgtctt tcag 24

<210> 439

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 439  
gctgctgggg actgcaatgt agct 24

<210> 440

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 440

catcctccat gtctcccatg aggtctctat tgctccacga agcatc 46

<210> 441

<211> 1964

<212> DNA

<213> Homo sapiens

<400> 441

cgcgccgggc gcagggagct gaggggacgg ctcgagacgg cggcgcggtgc 50  
agcagctcca gaaagcagcg agttggcaga gcagggctgc atttccagca 100  
ggagctgcga gcacagtgtt ggctcacaac aagatgtctc aggtgtcagc 150  
cgtactgtgt gtgtgtgcag ccgcttggtg cagtcagtct ctcgcagctg 200  
ccgcggcggt ggctgcagcc ggggggagggt cggacggcgg taattttctg 250  
gatgataaac aatggctcac cacaatctct cagtatgaca aggaagtcgg 300  
acagtggaac aaattccgag acgaagtaga ggatgattat ttccgcactt 350  
ggagtccagg aaaacccttc gatcaggctt tagatccagc taaggatcca 400  
tgcttaaaga tgaaatgtag tcgccataaa gtatgcattg ctcaagattc 450  
tcagactgca gtctgcatta gtcaccggag gcttacacac aggatgaaag 500  
aagcaggagt agaccatagg cagtggaggg gtcccatatt atccacctgc 550  
aagcagtgcc cagtggctta tccagccctt gtttgtggtt cagatggtca 600  
tacctactct ttccagtgc aactagaata tcaggcatgt gtcttaggaa 650  
aacagatctc agtcaaagt gaaggacatt gcccatgtcc ttcagataag 700  
cccaccagta caagcagaaa tgtaagaga gcatgcagtg acctggagtt 750  
caggggaagt gcaaacagat tcggggactg gttcaaggcc cttcatgaaa 800  
gtggaagtca aaacaagaag acaaaaacat tgctgaggcc tgagagaagc 850  
agattcgata ccagcatctt gccaatctgc aaggactcac ttggctggat 900  
gtttaacaga cttgatacaa actatgacct gctattggac cagtcagagc 950

tcagaagcat ttaccttgat aagaatgaac agtgtaccaa ggcattcttc 1000  
aattcttgatg acacatacaa ggacagttta atatctaata atgagtgggtg 1050  
ctactgcttc cagagacagc aagaccacc ttgccagact gagctcagca 1100  
atattcagaa ggggcaaggg gtaaagaagc tcctaggaca gtatatcccc 1150  
ctgtgtgatg aagatgggta ctacaagcca acacaatgtc atggcagtgt 1200  
tggacagtgc tgggtgtgttg acagatatgg aaatgaagtc atgggatcca 1250  
gaataaatgg tgttgcagat tgtgctatag attttgagat ctccggagat 1300  
tttgctagtgc gcgattttca tgaatggact gatgatgagg atgatgaaga 1350  
cgatattatg aatgatgaag atgaaattga agatgatgat gaagatgaag 1400  
gggatgatga tgatgggtgg gatgaccatg atgtatacat ttgattgatg 1450  
acagttgaaa tcaataaatt ctacatttct aatatttaca aaaatgatag 1500  
cctattitaaa attatcttct tcccataaa caaaatgatt ctaaacctca 1550  
catatatttt gtataattat ttgaaaaatt gcagctaaag ttatagaact 1600  
ttatgtttta ataagaatca tttgctttga gtttttatat tccttacaca 1650  
aaaagaaaat acatatgcag tctagtcaga caaaataaag ttttgaagtg 1700  
ctactataat aaatttttca cgagaacaaa ctttgtaaatt cttccataag 1750  
caaaatgaca gctagtgtt gggatcgtac atgttaattt tttgaaagat 1800  
aattctaagt gaaattttaa ataaataaat ttttaatgac ctgggtctta 1850  
aggatttagg aaaaatatgc atgctttaat tgcatttcca aagtagcatc 1900  
ttgctagacc tagatgagtc aggataacag agagatacca catgactcca 1950  
aaaaaaaaaaaa 1964

<210> 442

<211> 436

<212> PRT

<213> Homo sapiens

<400> 442

Met	Leu	Lys	Val	Ser	Ala	Val	Leu	Cys	Val	Cys	Ala	Ala	Ala	Trp
1				5				10						15

Cys	Ser	Gln	Ser	Leu	Ala	Ala	Ala	Ala	Ala	Val	Ala	Ala	Ala	Gly
				20				25						30

Gly	Arg	Ser	Asp	Gly	Gly	Asn	Phe	Leu	Asp	Asp	Lys	Gln	Trp	Leu
				35				40						45

Thr	Thr	Ile	Ser	Gln	Tyr	Asp	Lys	Glu	Val	Gly	Gln	Trp	Asn	Lys
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

50										55					60				
Phe	Arg	Asp	Glu	Val	Glu	Asp	Asp	Tyr	Phe	Arg	Thr	Trp	Ser	Pro					
				65					70					75					
Gly	Lys	Pro	Phe	Asp	Gln	Ala	Leu	Asp	Pro	Ala	Lys	Asp	Pro	Cys					
				80					85					90					
Leu	Lys	Met	Lys	Cys	Ser	Arg	His	Lys	Val	Cys	Ile	Ala	Gln	Asp					
				95					100					105					
Ser	Gln	Thr	Ala	Val	Cys	Ile	Ser	His	Arg	Arg	Leu	Thr	His	Arg					
				110					115					120					
Met	Lys	Glu	Ala	Gly	Val	Asp	His	Arg	Gln	Trp	Arg	Gly	Pro	Ile					
				125					130					135					
Leu	Ser	Thr	Cys	Lys	Gln	Cys	Pro	Val	Val	Tyr	Pro	Ser	Pro	Val					
				140					145					150					
Cys	Gly	Ser	Asp	Gly	His	Thr	Tyr	Ser	Phe	Gln	Cys	Lys	Leu	Glu					
				155					160					165					
Tyr	Gln	Ala	Cys	Val	Leu	Gly	Lys	Gln	Ile	Ser	Val	Lys	Cys	Glu					
				170					175					180					
Gly	His	Cys	Pro	Cys	Pro	Ser	Asp	Lys	Pro	Thr	Ser	Thr	Ser	Arg					
				185					190					195					
Asn	Val	Lys	Arg	Ala	Cys	Ser	Asp	Leu	Glu	Phe	Arg	Glu	Val	Ala					
				200					205					210					
Asn	Arg	Leu	Arg	Asp	Trp	Phe	Lys	Ala	Leu	His	Glu	Ser	Gly	Ser					
				215					220					225					
Gln	Asn	Lys	Lys	Thr	Lys	Thr	Leu	Leu	Arg	Pro	Glu	Arg	Ser	Arg					
				230					235					240					
Phe	Asp	Thr	Ser	Ile	Leu	Pro	Ile	Cys	Lys	Asp	Ser	Leu	Gly	Trp					
				245					250					255					
Met	Phe	Asn	Arg	Leu	Asp	Thr	Asn	Tyr	Asp	Leu	Leu	Leu	Asp	Gln					
				260					265					270					
Ser	Glu	Leu	Arg	Ser	Ile	Tyr	Leu	Asp	Lys	Asn	Glu	Gln	Cys	Thr					
				275					280					285					
Lys	Ala	Phe	Phe	Asn	Ser	Cys	Asp	Thr	Tyr	Lys	Asp	Ser	Leu	Ile					
				290					295					300					
Ser	Asn	Asn	Glu	Trp	Cys	Tyr	Cys	Phe	Gln	Arg	Gln	Gln	Asp	Pro					
				305					310					315					
Pro	Cys	Gln	Thr	Glu	Leu	Ser	Asn	Ile	Gln	Lys	Arg	Gln	Gly	Val					
				320					325					330					
Lys	Lys	Leu	Leu	Gly	Gln	Tyr	Ile	Pro	Leu	Cys	Asp	Glu	Asp	Gly					
				335					340					345					



Tyr	Tyr	Lys	Pro	Thr	Gln	Cys	His	Gly	Ser	Val	Gly	Gln	Cys	Trp
				350					355					360
Cys	Val	Asp	Arg	Tyr	Gly	Asn	Glu	Val	Met	Gly	Ser	Arg	Ile	Asn
				365					370					375
Gly	Val	Ala	Asp	Cys	Ala	Ile	Asp	Phe	Glu	Ile	Ser	Gly	Asp	Phe
				380					385					390
Ala	Ser	Gly	Asp	Phe	His	Glu	Trp	Thr	Asp	Asp	Glu	Asp	Asp	Glu
				395					400					405
Asp	Asp	Ile	Met	Asn	Asp	Glu	Asp	Glu	Ile	Glu	Asp	Asp	Asp	Glu
				410					415					420
Asp	Glu	Gly	Asp	Asp	Asp	Asp	Gly	Gly	Asp	Asp	His	Asp	Val	Tyr
				425					430					435

Ile

<210> 443

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 443

cagcaatatt cagaagcggc aaggg 25

<210> 444

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 444

catcatggtc atcaccacca tcatcatc 28

<210> 445

<211> 48

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 445

ggttactaca agccaacaca atgtcatggc agtgttggac agtgctgg 48

<210> 446

<211> 3617

<212> DNA

<213> Homo sapiens

<400> 446

cagactccag atttccctgt caaccacgag gagtccagag aggaaacgcg 50  
gagcggagac aacagtacct gacgcctctt tcagcccggg atcgccccag 100  
cagggatggg cgacaagatc tggctgccct tccccgtgct ccttctggcc 150  
gctctgcctc cgggtgctgct gcctggggcg gccggcttca caccttcct 200  
cgatagcgac ttacacctta cccttcccgc cggccagaag gagtgttct 250  
accagcccat gcccctgaag gcctcgctgg agatcgagta ccaagtttta 300  
gatggagcag gattagatat tgatttccat cttgcctctc cagaaggcaa 350  
aaccttagtt tttgaacaaa gaaaatcaga tggagttcac actgtagaga 400  
ctgaagttgg tgattacatg ttctgctttg acaatacatt cagcaccatt 450  
tctgagaagg tgattttctt tgaattaatc ctggataata tgggagaaca 500  
ggcacaagaa caagaagatt ggaagaaata tattactggc acagatatat 550  
tggatatgaa actggaagac atcctggaat ccatcaacag catcaagtcc 600  
agactaagca aaagtgggca catacaaatt ctgcttagag catttgaagc 650  
tcgtgatcga aacatacaag aaagcaactt tgatagagtc aatttctggt 700  
ctatggttaa tttagtggc atggtggtgg tgtcagccat tcaagtttat 750  
atgctgaaga gtctgtttga agataagagg aaaagtagaa cttaaaactc 800  
caaaactagag tacgtaacat tgaaaaatga ggcataaaaa tgcaataaac 850  
tgttacagtc aagaccatta atggtcttct ccaaaatatt ttgagatata 900  
aaagtaggaa acaggtataa ttttaatgtg aaaattaagt cttcactttc 950  
tgtgcaagta atcctgctga tccagttgta ctttaagtgtg taacaggaat 1000  
attttgcaga atataggttt aactgaatga agccatatta ataactgcat 1050  
tttcctaact ttgaaaaatt ttgcaaatgt cttaggtgat ttaataaat 1100  
gagtattggg cctaattgca acaccagtct gtttttaaca ggttctatta 1150  
cccagaactt ttttgtaa at gcggcagtta caaattaact gtggaagttt 1200  
tcagttttta gttataaatc acctgagaat tacctaataa tggattgaat 1250  
aaatctttag actacaaaag cccaactttt ctctatttac atatgcatct 1300  
ctcctataat gtaaataagaa taatagcttt gaaatacaat taggtttttg 1350  
agatttttat aaccaaatac atttcagtgt aacatattag cagaaagcat 1400  
tagtctttgt actttgctta cattcccaaa agctgacatt ttcacgattc 1450

ttaaaaacac aaagttacac ttactaaaat taggacatgt tttctctttg 1500  
 aaatgaagaa tatagtttaa aagcttcctc ctccataggg acacattttc 1550  
 tctaaccctt aactaaagt taggatttta aaattaaatg tgaggtaaaa 1600  
 taagtttatt tttaatagta tctgtcaagt taatatctgt caacagttaa 1650  
 taatcatgtt atgttaattt taacatgatt gctgacttgg ataattcatt 1700  
 attaccagca gttatgaagg aaatattgct aaaatgatct gggcctacca 1750  
 taaataaata tctccttttc tgagctctaa gaattatcag aaaacaggaa 1800  
 agaatttaga aaaacttgag aaaaccta ccaaaataaa attcacttaa 1850  
 gtagaactat aaataaatat ctagaatctg actggctcat catgacatcc 1900  
 tactcataac ataaatcaaa ggagatgatt aatttccagt tagctggaag 1950  
 aaactttggc tgtaggtttt tattttctac aagaattctg gtttgaatta 2000  
 tttttgtaag caggtacatt ttataaaatg taagccctac tgtaaggttt 2050  
 agcactgggt gtacatatatt attaaaaatt tttattataa caacttttat 2100  
 taaaatggcc tttctgaaca ctttatttat tgatgttgaa gtaaggatta 2150  
 gaaacataga ctccaagtt ttaaacacct aaatgtgaat aacctatata 2200  
 tacaacaaag tttctgccat ctagcttttt gaagtctatg ggggtcttac 2250  
 tcaagtacta gtaatttaac ttcacatga atgaactata atttttaagt 2300  
 tatgccatt tataacgttg tttatgacta cattgtgagt tagaaacaaa 2350  
 cttaaaattt ggggtataga acccctcaac aggttagtaa tgctggaatt 2400  
 cttgatgagc aataatgata accagagagt gatttcattt aactcatag 2450  
 tagtataaaa agagatacat ttccctctta ggcccctggg agaagagcag 2500  
 cttagatttc cctactggca aggtttttta aaatgaggta aatgccgtat 2550  
 atgatcaatt accttaattg gccaagaaaa tgcttcaggt gtctaggggt 2600  
 atcctctgca aacttgcag acaaaggctc aataagatcc ttgcctatga 2650  
 ataccctcc cttttgcgct gttaaatttg caatgagaag caaatttaca 2700  
 gtaccataac taataaagca ggtacagat ataaactact gcatcttttc 2750  
 tataaaactg tgattaagaa ttctacctt cctgtatggc tgttactgta 2800  
 ctgtactctc tgactcctta cctaacaatg aatttgttac ataactttct 2850  
 acatgtatga tttgtgccac tgatcttaaa cctatgattc agtaacttct 2900

taccatataa aaacgataat tgctttatatt ggaaaagaat ttaggaatac 2950  
 taaggacaat tatttttata gacaaagtaa aaagacagat atttaagagg 3000  
 cataacccaaa aaagcaaaac ttgtaaacag agtaaaaatc tttaatattt 3050  
 ctaaagacat actgtttatc tgcttcatat gcttttttta atttcactat 3100  
 tccattttcta aattaaagtt atgctaaatt gagtaagctg tttatcactt 3150  
 aacagctcat tttgtctttt tcaatataca aatttttaaaa atactacaat 3200  
 atttaactaa ggcccaaccg atttccataa tgtagcagtt accgtgttca 3250  
 cctcacacta aggcctagag tttgctctga tatgcatttg gatgattaat 3300  
 gttatgctgt tctttcatgt gaatgtcaag acatggaggg tgtttgtaat 3350  
 tttatggtaa aattaatcct tcttacacat aatgggtgtct taaaattgac 3400  
 aaaaaatgag cacttacaat tgtatgtctc ctcaaagaa gattctttat 3450  
 gtgaaattttt aaaagacatt gattccgcat gtaaggattt ttcactctgaa 3500  
 gtacaataat gcacaatcag tgttgctcaa actgctttat acttataaac 3550  
 agccatctta aataagcaac gtattgtgag tactgatatg tatataataa 3600  
 aaattatcaa aggaaaaa 3617

<210> 447

<211> 229

<212> PRT

<213> Homo sapiens

<400> 447

Met	Gly	Asp	Lys	Ile	Trp	Leu	Pro	Phe	Pro	Val	Leu	Leu	Leu	Ala
1				5					10					15
Ala	Leu	Pro	Pro	Val	Leu	Leu	Pro	Gly	Ala	Ala	Gly	Phe	Thr	Pro
				20					25					30
Ser	Leu	Asp	Ser	Asp	Phe	Thr	Phe	Thr	Leu	Pro	Ala	Gly	Gln	Lys
				35					40					45
Glu	Cys	Phe	Tyr	Gln	Pro	Met	Pro	Leu	Lys	Ala	Ser	Leu	Glu	Ile
				50					55					60
Glu	Tyr	Gln	Val	Leu	Asp	Gly	Ala	Gly	Leu	Asp	Ile	Asp	Phe	His
				65					70					75
Leu	Ala	Ser	Pro	Glu	Gly	Lys	Thr	Leu	Val	Phe	Glu	Gln	Arg	Lys
				80					85					90
Ser	Asp	Gly	Val	His	Thr	Val	Glu	Thr	Glu	Val	Gly	Asp	Tyr	Met
				95					100					105
Phe	Cys	Phe	Asp	Asn	Thr	Phe	Ser	Thr	Ile	Ser	Glu	Lys	Val	Ile

	110	115	120
Phe Phe Glu Leu	Ile Leu Asp Asn Met	Gly Glu Gln Ala Gln	Glu
	125	130	135
Gln Glu Asp Trp	Lys Lys Tyr Ile Thr	Gly Thr Asp Ile Leu	Asp
	140	145	150
Met Lys Leu Glu	Asp Ile Leu Glu Ser	Ile Asn Ser Ile Lys	Ser
	155	160	165
Arg Leu Ser Lys	Ser Gly His Ile Gln	Ile Leu Leu Arg Ala	Phe
	170	175	180
Glu Ala Arg Asp	Arg Asn Ile Gln Glu	Ser Asn Phe Asp Arg	Val
	185	190	195
Asn Phe Trp Ser	Met Val Asn Leu Val	Val Met Val Val Val	Ser
	200	205	210
Ala Ile Gln Val	Tyr Met Leu Lys Ser	Leu Phe Glu Asp Lys	Arg
	215	220	225

Lys Ser Arg Thr

<210> 448

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 448

cccagcaggg ctgggcgaca aga 23

<210> 449

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 449

gtcttccagt ttcatatcca ata 23

<210> 450

<211> 43

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 450

ccagaaggag cacggggaag ggcagccaga tcttgctgcc cat 43

<210> 451  
 <211> 859  
 <212> DNA  
 <213> Homo sapiens

<400> 451  
 ccatccctga gatcttttta taaaaaaccc agtctttgct gaccagacaa 50  
 agcataccag atctcaccag agagtcgcag acactatgct gcctcccatg 100  
 gccctgccca gtgtgtcctg gatgctgctt tcctgcctca ttctcctgtg 150  
 tcaggttcaa ggtgaagaaa ccagaagga actgccctct ccacggatca 200  
 gctgtcccaa aggctccaag gcctatggct cccctgcta tgcttgttt 250  
 ttgtcaccaa aatcctggat ggatgcagat ctggcttgcc agaagcggcc 300  
 ctctggaaaa ctggtgtctg tgctcagtgg ggctgaggga tccttcgtgt 350  
 cctccctggt gaggagcatt agtaacagct actcatacat ctggattggg 400  
 ctccatgacc ccacacaggg ctctgagcct gatggagatg gatgggagtg 450  
 gagtagcact gatgtgatga attactttgc atgggagaaa aatccctcca 500  
 ccatcttaaa ccctggccac tgtgggagcc tgtcaagaag cacaggattt 550  
 ctgaagtga aagattataa ctgtgatgca aagttaccct atgtctgcaa 600  
 gttcaaggac tagggcaggt gggaagtcag cagcctcagc ttggcgtgca 650  
 gctcatcatg gacatgagac cagtgtgaag actcaccctg gaagagaata 700  
 ttctcccaa actgccctac ctgactacct tgtcatgatc ctcttcttt 750  
 ttcttttttc ttacacctca ttccaggctt ttctctgtct tccatgtctt 800  
 gagatctcag agaataataa taaaatggt actttataaa aaaaaaaaaa 850  
 aaaaaaaaaa 859

<210> 452  
 <211> 175  
 <212> PRT  
 <213> Homo sapiens

<400> 452  
 Met Leu Pro Pro Met Ala Leu Pro Ser Val Ser Trp Met Leu Leu  
 1 5 10 15  
 Ser Cys Leu Ile Leu Leu Cys Gln Val Gln Gly Glu Glu Thr Gln  
 20 25 30  
 Lys Glu Leu Pro Ser Pro Arg Ile Ser Cys Pro Lys Gly Ser Lys  
 35 40 45  
 Ala Tyr Gly Ser Pro Cys Tyr Ala Leu Phe Leu Ser Pro Lys Ser

	50	55	60
Trp Met Asp Ala Asp Leu Ala Cys Gln Lys Arg Pro Ser Gly Lys	65	70	75
Leu Val Ser Val Leu Ser Gly Ala Glu Gly Ser Phe Val Ser Ser	80	85	90
Leu Val Arg Ser Ile Ser Asn Ser Tyr Ser Tyr Ile Trp Ile Gly	95	100	105
Leu His Asp Pro Thr Gln Gly Ser Glu Pro Asp Gly Asp Gly Trp	110	115	120
Glu Trp Ser Ser Thr Asp Val Met Asn Tyr Phe Ala Trp Glu Lys	125	130	135
Asn Pro Ser Thr Ile Leu Asn Pro Gly His Cys Gly Ser Leu Ser	140	145	150
Arg Ser Thr Gly Phe Leu Lys Trp Lys Asp Tyr Asn Cys Asp Ala	155	160	165
Lys Leu Pro Tyr Val Cys Lys Phe Lys Asp	170	175	

<210> 453  
 <211> 550  
 <212> DNA  
 <213> Homo sapiens

<400> 453  
 ccagtctgtc gccacctcac ttggtgtctg ctgtccccgc caggcaagcc 50  
 tggggtgaga gcacagagga gtgggcccgg accatgcggg ggacgcggct 100  
 ggcgtccttg gcgttggtgc tggctgcctg cggagagctg gcgccggccc 150  
 tgcgtgcta cgtctgtccg gagccacag gagtgtcggga ctgtgtcacc 200  
 atcgccacct gcaccaccaa cgaaaccatg tgcaagacca cactctactc 250  
 ccgggagata gtgtaccctt tccaggggga ctccacggtg accaagtcct 300  
 gtgccagcaa gtgtaagccc tcggatgtgg atggcatcgg ccagaccctg 350  
 cccgtgtcct gctgcaatac tgagctgtgc aatgtagacg gggcgcccgc 400  
 tctgaacagc ctccactgcg gggccctcac gtcctccca ctcttgagcc 450  
 tccgactgta gagtccccgc ccacccccat ggccctatgc ggcccagccc 500  
 cgaatgcctt gaagaagtgc ccctgcacc aggaaaaaaa aaaaaaaaaa 550

<210> 454  
 <211> 125  
 <212> PRT  
 <213> Homo sapiens

<400> 454

Met Arg Gly Thr Arg Leu Ala Leu Leu Ala Leu Val Leu Ala Ala  
1 5 10 15  
Cys Gly Glu Leu Ala Pro Ala Leu Arg Cys Tyr Val Cys Pro Glu  
20 25 30  
Pro Thr Gly Val Ser Asp Cys Val Thr Ile Ala Thr Cys Thr Thr  
35 40 45  
Asn Glu Thr Met Cys Lys Thr Thr Leu Tyr Ser Arg Glu Ile Val  
50 55 60  
Tyr Pro Phe Gln Gly Asp Ser Thr Val Thr Lys Ser Cys Ala Ser  
65 70 75  
Lys Cys Lys Pro Ser Asp Val Asp Gly Ile Gly Gln Thr Leu Pro  
80 85 90  
Val Ser Cys Cys Asn Thr Glu Leu Cys Asn Val Asp Gly Ala Pro  
95 100 105  
Ala Leu Asn Ser Leu His Cys Gly Ala Leu Thr Leu Leu Pro Leu  
110 115 120  
Leu Ser Leu Arg Leu  
125

<210> 455

<211> 1518

<212> DNA

<213> Homo sapiens

<400> 455

ctgcagtcag gactctggga ccgcaggggg ctcccggacc ctgactctgc 50  
agccgaaccg gcacggtttc gtggggaccc aggcttgcaa agtgacggtc 100  
atcttctctt tctttctccc tcttgagtc ttctgagatg atggctctgg 150  
gcgcagcggg agctaccogg gtctttgtcg cgatggtagc ggcggtcttc 200  
ggcggccacc ctctgctggg agtgagcgcc acctgaact cggttctcaa 250  
ttccaacgct atcaagaacc tgccccacc gctgggcggc gctgcggggc 300  
accaggctc tgcaagcagg gccgcgcgg gaatcctgta cccgggcggg 350  
aataagtacc agaccattga caactaccag ccgtaccgt gcgcagagga 400  
cgaggagtgc ggcaactgat agtactgcgc tagtcccacc cgcggagggg 450  
acgcaggcgt gcaaactctgt ctgcctgca ggaagcgccg aaaacgctgc 500  
atgcgtcacg ctatgtgctg ccccggaat tactgcaaaa atggaatatg 550  
tgtgtcttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600



ctgaaagctt tggtaatgat catagcacct tggatgggta ttccagaaga 650  
 accaccttgt cttcaaaaat gtatcacacc aaaggacaag aaggttctgt 700  
 ttgtctccgg tcatcagact gtgcctcagg attgtgttgt gctagacact 750  
 tctggtccaa gatctgtaaa cctgtcctga aagaaggta agtgtgtacc 800  
 aagcatagga gaaaaggctc tcatggacta gaaatattcc agcgttggtta 850  
 ctgtggagaa ggtctgtctt gccggataca gaaagatcac catcaagcca 900  
 gtaattcttc taggcttcac acttgtcaga gacactaaac cagctatcca 950  
 aatgcagtga actcctttta tataatagat gctatgaaaa ccttttatga 1000  
 ccttcatcaa ctcaatccta aggatataca agttctgtgg tttcagttaa 1050  
 gcattccaat aacaccttcc aaaaacctgg agtgtaagag ctttgtttct 1100  
 ttatggaact cccctgtgat tgcagtaaat tactgtattg taaattctca 1150  
 gtgtggcact tacctgtaaa tgcaatgaaa cttttaatta tttttctaaa 1200  
 ggtgctgcac tgccatattt tcctcttggt atgtaaattt ttgtacacat 1250  
 tgattgttat cttgactgac aaatattcta tattgaactg aagtaaatca 1300  
 tttcagotta tagttcttaa aagcataacc ctttacccca ttttaattcta 1350  
 gagtctagaa cgcaaggatc tcttggaatg acaaatgata ggtacctaaa 1400  
 atgtaacatg aaaatactag cttattttct gaaatgtact atcttaatgc 1450  
 ttaaattata tttcccttta ggctgtgata gtttttgaaa taaaatttaa 1500  
 catttaaaaa aaaaaaaaa 1518

<210> 456  
 <211> 266  
 <212> PRT  
 <213> Homo sapiens

<400> 456  
 Met Met Ala Leu Gly Ala Ala Gly Ala Thr Arg Val Phe Val Ala  
 1 5 10 15  
 Met Val Ala Ala Ala Leu Gly Gly His Pro Leu Leu Gly Val Ser  
 20 25 30  
 Ala Thr Leu Asn Ser Val Leu Asn Ser Asn Ala Ile Lys Asn Leu  
 35 40 45  
 Pro Pro Pro Leu Gly Gly Ala Ala Gly His Pro Gly Ser Ala Val  
 50 55 60  
 Ser Ala Ala Pro Gly Ile Leu Tyr Pro Gly Gly Asn Lys Tyr Gln  
 65 70 75

Thr	Ile	Asp	Asn	Tyr	Gln	Pro	Tyr	Pro	Cys	Ala	Glu	Asp	Glu	Glu	
					80					85				90	
Cys	Gly	Thr	Asp	Glu	Tyr	Cys	Ala	Ser	Pro	Thr	Arg	Gly	Gly	Asp	
				95					100					105	
Ala	Gly	Val	Gln	Ile	Cys	Leu	Ala	Cys	Arg	Lys	Arg	Arg	Lys	Arg	
				110					115					120	
Cys	Met	Arg	His	Ala	Met	Cys	Cys	Pro	Gly	Asn	Tyr	Cys	Lys	Asn	
				125					130					135	
Gly	Ile	Cys	Val	Ser	Ser	Asp	Gln	Asn	His	Phe	Arg	Gly	Glu	Ile	
				140					145					150	
Glu	Glu	Thr	Ile	Thr	Glu	Ser	Phe	Gly	Asn	Asp	His	Ser	Thr	Leu	
				155					160					165	
Asp	Gly	Tyr	Ser	Arg	Arg	Thr	Thr	Leu	Ser	Ser	Lys	Met	Tyr	His	
				170					175					180	
Thr	Lys	Gly	Gln	Glu	Gly	Ser	Val	Cys	Leu	Arg	Ser	Ser	Asp	Cys	
				185					190					195	
Ala	Ser	Gly	Leu	Cys	Cys	Ala	Arg	His	Phe	Trp	Ser	Lys	Ile	Cys	
				200					205					210	
Lys	Pro	Val	Leu	Lys	Glu	Gly	Gln	Val	Cys	Thr	Lys	His	Arg	Arg	
				215					220					225	
Lys	Gly	Ser	His	Gly	Leu	Glu	Ile	Phe	Gln	Arg	Cys	Tyr	Cys	Gly	
				230					235					240	
Glu	Gly	Leu	Ser	Cys	Arg	Ile	Gln	Lys	Asp	His	His	Gln	Ala	Ser	
				245					250					255	
Asn	Ser	Ser	Arg	Leu	His	Thr	Cys	Gln	Arg	His					
				260					265						

<210> 457

<211> 638

<212> DNA

<213> Homo sapiens

<220>

<221> unsure

<222> 30, 123, 133, 139, 180, 214, 259, 282, 308, 452, 467, 471, 473, 509, 556

<223> unknown base

<400> 457

tgtgtttccc tgcagtcaga atttgggacn gcaggggttc ccggacctga 50

ttttgcagcg gaacgggaag gttttgtggg acccaggttg aaatgacggt 100

catttttttt tctttctcct tcnngagtcc ttntgagang atggtttttg 150

gcgcagcggg agctaaccog gttttttgtn gcgatggtag cggcggtttt 200

cggcggccac ctnttgctgg gaggtagcgc caccttgaat cggttttcaa 250  
 ttccaacgnt atcaagaacc tgccccacc gntgggcggc gctgcggggc 300  
 acccaggntt tgcagtcagc gccgcgccgg gaatcctgta cccgggcggg 350  
 aataagtacc agaccattga caattaccag ccgtaccctg gcgcagagga 400  
 cgaggagtgc ggcactgatg agtactgcgc tagtcccacc cgcgaggagg 450  
 angcgggcgt gcaaantgt ntngcctgca ggaagcgccg aaaacgctgc 500  
 atgcgtcang ctatgtgctg ccccggaat tactgcaaaa atggaatatg 550  
 tgtgtnttct gatcaaaatc atttccgagg agaaattgag gaaaccatca 600  
 ctgaaagctt tggaatgat catagcacct tggatggg 638

<210> 458

<211> 4040

<212> DNA

<213> Homo sapiens

<400> 458

gaggaaccta ccggtaccgg ccgcgcgctg gtagtcgccg gtgtggctgc 50  
 acctcaccaa tcccgtgcgc cgcggtggg ccgtcggaga gtgcgtgtgc 100  
 ttctctcctg cagcgggtgc ttgggctcgg ccaggcgggg tccgcgcgca 150  
 gggtttgagg atgggggagt agctacagga agcgaccccg cgatggcaag 200  
 gtatatTTTT gtggaatgaa aaggaagtat tagaaatgag ctgaagacca 250  
 ttcacagatt aatatTTTTg gggacagatt tgtgatgctt gattcaccct 300  
 tgaagtaatg tagacagaag ttctcaaatt tgcattattac atcaactgga 350  
 accagcagtg aatcttaatg ttcacttaaa tcagaacttg cataagaaag 400  
 agaatgggag tctggttaaa taaagatgac tatatcagag acttgaaaag 450  
 gatcattctc tgttttctga tagtgtatat ggccatttta gtgggcacag 500  
 atcaggattt ttacagttta cttggagtgt ccaaaactgc aagcagtaga 550  
 gaaataagac aagctttcaa gaaattggca ttgaagttac atcctgataa 600  
 aaaccggaat aaccctaatg cacatggcga ttttttaaaa ataaatagag 650  
 catatgaagt actcaaagat gaagatctac ggaaaaagta tgacaaatat 700  
 ggagaaaagg gacttgagga taatcaaggt ggccagtatg aaagctggaa 750  
 ctattatcgt tatgattttg gtatttatga tgatgatcct gaaatcataa 800  
 cattggaaag aagagaattt gatgctgctg ttaattctgg agaactgtgg 850

tttgtaaatt tttactcccc aggctgttca cactgccatg atttagctcc 900  
 cacatggaga gactttgcta aagaagtgga tgggttactt cgaattggag 950  
 ctgttaactg tggatgatgat agaatgcttt gccgaatgaa aggagtcaac 1000  
 agctatccca gtctcttcat ttttcggtct ggaatggccc cagtgaata 1050  
 tcatggagac agatcaaagg agagtttagt gagttttgca atgcagcatg 1100  
 ttagaagtac agtgacagaa ctttgacag gaaattttgt caactccata 1150  
 caaactgctt ttgctgctgg tattggctgg ctgatcactt tttgttcaaa 1200  
 aggaggagat tgtttgactt cacagacacg actcaggctt agtggcatgt 1250  
 tgtttctcaa ctcatggat gctaaagaaa tatatttga agtaatacat 1300  
 aatcttcag attttgaact actttcggca aacacactag aggatcgttt 1350  
 ggctcatcat cgggtggctgt tattttttca ttttgaaaaa aatgaaaatt 1400  
 caaatgatcc tgagctgaaa aaactaaaaa ctctacttaa aaatgatcat 1450  
 attcaagttg gcaggtttga ctgttcctct gcaccagaca tctgtagtaa 1500  
 tctgtatgtt tttcagccgt ctctagcagt atttaaagga caaggaacca 1550  
 aagaatatga aattcatcat ggaaagaaga ttctatatga tatacttgcc 1600  
 tttgcaaag aaagtgtgaa ttctcatgtt accacgcttg gacctcaaaa 1650  
 ttttctgcc aatgacaaag aaccatggct tgttgatttc tttgccccct 1700  
 ggtgtccacc atgtcgagct ttactaccag agttacgaag agcatcaa 1750  
 cttctttatg gtcagcttaa gtttggta caagattgta cagttcatga 1800  
 gggactctgt aacatgtata acattcaggc ttatccaaca acagtggat 1850  
 tcaaccagtc caacattcat gagtatgaag gacatcactc tgctgaacaa 1900  
 atcttgagat tcatagagga tcttatgaat ccttcagtgg tctcccttac 1950  
 acccaccacc ttcaacgaac tagttacaca aagaaaacac aacgaagtct 2000  
 ggatggttga tttctattct ccgtgggtgc atccttgcca agtcttaatg 2050  
 ccagaatgga aaagaatggc ccggacatta actggactga tcaacgtggg 2100  
 cagtatagat tgccaacagt atcattcttt ttgtgcccag gaaaacgttc 2150  
 aaagataccc tgagataaga ttttttcccc caaaatcaaa taaagcttat 2200  
 cagtatcaca gttacaatgg ttggaatagg gatgcttatt ccctgagaat 2250  
 ctgggggtcta ggatttttac ctcaagtatc cacagatcta acacctcaga 2300

ctttcagtga aaaagttcta caagggaaaa atcattgggt gattgatttc 2350  
tatgctcctt ggtgtggacc ttgccagaat tttgctccag aatttgagct 2400  
cttggctagg atgattaaag gaaaagtga agctggaaaa gtagactgtc 2450  
aggcttatgc tcagacatgc cagaaagctg ggatcagggc ctatccaact 2500  
gttaagtttt atttctacga aagagcaaag agaaattttc aagaagagca 2550  
gataaatacc agagatgcaa aagcaatcgc tgccttaata agtgaaaaat 2600  
tggaactct cggaaatcaa ggcaagagga ataaggatga actttgataa 2650  
tggtgaagat gaagaaaaag tttaaaagaa attctgacag atgacatcag 2700  
aagacaccta tttagaatgt tacatttatg atgggaatga atgaacatta 2750  
tcttagactt gcagttgtac tgccagaatt atctacagca ctggtgtaaa 2800  
agaagggtct gcaaactttt tctgtaaagg gccggtttat aaatatttta 2850  
gactttgcag gctataatat atggttcaca catgagaaca agaataagat 2900  
catcatgtat tttttgttat ttgcttttaa caacctttta aaaatattaa 2950  
aacgattcct agctcagagc catacaaaag taggctggat tcagtccatg 3000  
gaccatagat tgctgtcccc ctgcacggac ttataatgtt tcagggtggct 3050  
ggcttgaaca tgagtctgct gtgctatcta cataaatgtc taagttgtat 3100  
aaagtccact ttcccttcac gttttttggc tgacctgaaa agaggtaact 3150  
tagtttttgg tcaactgttc tcctaaaaat gctatcccta accatatatt 3200  
tatatttcgt tttaaaaaca cccatgatgt ggcacagtaa acaaaccctg 3250  
ttatgctgta ttattatgag gagattcttc attgttttct ttccttctca 3300  
aaggttgaaa aaatgctttt aatttttcac agccgagaaa cagtgcagca 3350  
gtatatgtgc acacagtaag tacacaaatt tgagcaacag taagtgcaca 3400  
aattctgtag tttgctgtat catccaggaa aacctgaggg aaaaaatta 3450  
tagcaattaa ctgggcattg tagagtatcc taaatatgtt atcaagtatt 3500  
tagagttcta ttttttaaag atatatgtgt tcatgtattt tctgaaattg 3550  
ctttcataga aattttccca ctgatagttg atttttgagg catctaatat 3600  
ttacatattt gccttctgaa ctttgttttg acctgtatcc tttatttaca 3650  
ttgggttttt ctttcatagt ttgggttttt cactcctgtc cagtctattt 3700  
attattcaaa taggaaaaat tactttacag gttgttttac tgtagcttat 3750

aatgatactg tagttattcc agttactagt ttactgtcag agggctgcct 3800  
 ttttcagata aatattgaca taataactga agttattttt ataagaaaat 3850  
 caagtatata aatctaggaa agggatcttc tagtttctgt gttgtttaga 3900  
 ctcaaagaat cacaaatttg tcagtaacat gtagttgttt agttataatt 3950  
 cagagtgtac agaatggtaa aaattccaat cagtcaaaaag aggtcaatga 4000  
 attaaaaggc ttgcaacttt ttcaaaaaaa aaaaaaaaaa 4040

<210> 459

<211> 747

<212> PRT

<213> Homo sapiens

<400> 459

Met	Gly	Val	Trp	Leu	Asn	Lys	Asp	Asp	Tyr	Ile	Arg	Asp	Leu	Lys	1	5	10	15
Arg	Ile	Ile	Leu	Cys	Phe	Leu	Ile	Val	Tyr	Met	Ala	Ile	Leu	Val	20	25	30	
Gly	Thr	Asp	Gln	Asp	Phe	Tyr	Ser	Leu	Leu	Gly	Val	Ser	Lys	Thr	35	40	45	
Ala	Ser	Ser	Arg	Glu	Ile	Arg	Gln	Ala	Phe	Lys	Lys	Leu	Ala	Leu	50	55	60	
Lys	Leu	His	Pro	Asp	Lys	Asn	Pro	Asn	Asn	Pro	Asn	Ala	His	Gly	65	70	75	
Asp	Phe	Leu	Lys	Ile	Asn	Arg	Ala	Tyr	Glu	Val	Leu	Lys	Asp	Glu	80	85	90	
Asp	Leu	Arg	Lys	Lys	Tyr	Asp	Lys	Tyr	Gly	Glu	Lys	Gly	Leu	Glu	95	100	105	
Asp	Asn	Gln	Gly	Gly	Gln	Tyr	Glu	Ser	Trp	Asn	Tyr	Tyr	Arg	Tyr	110	115	120	
Asp	Phe	Gly	Ile	Tyr	Asp	Asp	Asp	Pro	Glu	Ile	Ile	Thr	Leu	Glu	125	130	135	
Arg	Arg	Glu	Phe	Asp	Ala	Ala	Val	Asn	Ser	Gly	Glu	Leu	Trp	Phe	140	145	150	
Val	Asn	Phe	Tyr	Ser	Pro	Gly	Cys	Ser	His	Cys	His	Asp	Leu	Ala	155	160	165	
Pro	Thr	Trp	Arg	Asp	Phe	Ala	Lys	Glu	Val	Asp	Gly	Leu	Leu	Arg	170	175	180	
Ile	Gly	Ala	Val	Asn	Cys	Gly	Asp	Asp	Arg	Met	Leu	Cys	Arg	Met	185	190	195	
Lys	Gly	Val	Asn	Ser	Tyr	Pro	Ser	Leu	Phe	Ile	Phe	Arg	Ser	Gly				

200										205					210				
Met	Ala	Pro	Val	Lys	Tyr	His	Gly	Asp	Arg	Ser	Lys	Glu	Ser	Leu					
				215					220					225					
Val	Ser	Phe	Ala	Met	Gln	His	Val	Arg	Ser	Thr	Val	Thr	Glu	Leu					
				230					235					240					
Trp	Thr	Gly	Asn	Phe	Val	Asn	Ser	Ile	Gln	Thr	Ala	Phe	Ala	Ala					
				245					250					255					
Gly	Ile	Gly	Trp	Leu	Ile	Thr	Phe	Cys	Ser	Lys	Gly	Gly	Asp	Cys					
				260					265					270					
Leu	Thr	Ser	Gln	Thr	Arg	Leu	Arg	Leu	Ser	Gly	Met	Leu	Phe	Leu					
				275					280					285					
Asn	Ser	Leu	Asp	Ala	Lys	Glu	Ile	Tyr	Leu	Glu	Val	Ile	His	Asn					
				290					295					300					
Leu	Pro	Asp	Phe	Glu	Leu	Leu	Ser	Ala	Asn	Thr	Leu	Glu	Asp	Arg					
				305					310					315					
Leu	Ala	His	His	Arg	Trp	Leu	Leu	Phe	Phe	His	Phe	Gly	Lys	Asn					
				320					325					330					
Glu	Asn	Ser	Asn	Asp	Pro	Glu	Leu	Lys	Lys	Leu	Lys	Thr	Leu	Leu					
				335					340					345					
Lys	Asn	Asp	His	Ile	Gln	Val	Gly	Arg	Phe	Asp	Cys	Ser	Ser	Ala					
				350					355					360					
Pro	Asp	Ile	Cys	Ser	Asn	Leu	Tyr	Val	Phe	Gln	Pro	Ser	Leu	Ala					
				365					370					375					
Val	Phe	Lys	Gly	Gln	Gly	Thr	Lys	Glu	Tyr	Glu	Ile	His	His	Gly					
				380					385					390					
Lys	Lys	Ile	Leu	Tyr	Asp	Ile	Leu	Ala	Phe	Ala	Lys	Glu	Ser	Val					
				395					400					405					
Asn	Ser	His	Val	Thr	Thr	Leu	Gly	Pro	Gln	Asn	Phe	Pro	Ala	Asn					
				410					415					420					
Asp	Lys	Glu	Pro	Trp	Leu	Val	Asp	Phe	Phe	Ala	Pro	Trp	Cys	Pro					
				425					430					435					
Pro	Cys	Arg	Ala	Leu	Leu	Pro	Glu	Leu	Arg	Arg	Ala	Ser	Asn	Leu					
				440					445					450					
Leu	Tyr	Gly	Gln	Leu	Lys	Phe	Gly	Thr	Leu	Asp	Cys	Thr	Val	His					
				455					460					465					
Glu	Gly	Leu	Cys	Asn	Met	Tyr	Asn	Ile	Gln	Ala	Tyr	Pro	Thr	Thr					
				470					475					480					
Val	Val	Phe	Asn	Gln	Ser	Asn	Ile	His	Glu	Tyr	Glu	Gly	His	His					
				485					490					495					

Ser	Ala	Glu	Gln	Ile	Leu	Glu	Phe	Ile	Glu	Asp	Leu	Met	Asn	Pro	
				500					505					510	
Ser	Val	Val	Ser	Leu	Thr	Pro	Thr	Thr	Phe	Asn	Glu	Leu	Val	Thr	
				515					520					525	
Gln	Arg	Lys	His	Asn	Glu	Val	Trp	Met	Val	Asp	Phe	Tyr	Ser	Pro	
				530					535					540	
Trp	Cys	His	Pro	Cys	Gln	Val	Leu	Met	Pro	Glu	Trp	Lys	Arg	Met	
				545					550					555	
Ala	Arg	Thr	Leu	Thr	Gly	Leu	Ile	Asn	Val	Gly	Ser	Ile	Asp	Cys	
				560					565					570	
Gln	Gln	Tyr	His	Ser	Phe	Cys	Ala	Gln	Glu	Asn	Val	Gln	Arg	Tyr	
				575					580					585	
Pro	Glu	Ile	Arg	Phe	Phe	Pro	Pro	Lys	Ser	Asn	Lys	Ala	Tyr	Gln	
				590					595					600	
Tyr	His	Ser	Tyr	Asn	Gly	Trp	Asn	Arg	Asp	Ala	Tyr	Ser	Leu	Arg	
				605					610					615	
Ile	Trp	Gly	Leu	Gly	Phe	Leu	Pro	Gln	Val	Ser	Thr	Asp	Leu	Thr	
				620					625					630	
Pro	Gln	Thr	Phe	Ser	Glu	Lys	Val	Leu	Gln	Gly	Lys	Asn	His	Trp	
				635					640					645	
Val	Ile	Asp	Phe	Tyr	Ala	Pro	Trp	Cys	Gly	Pro	Cys	Gln	Asn	Phe	
				650					655					660	
Ala	Pro	Glu	Phe	Glu	Leu	Leu	Ala	Arg	Met	Ile	Lys	Gly	Lys	Val	
				665					670					675	
Lys	Ala	Gly	Lys	Val	Asp	Cys	Gln	Ala	Tyr	Ala	Gln	Thr	Cys	Gln	
				680					685					690	
Lys	Ala	Gly	Ile	Arg	Ala	Tyr	Pro	Thr	Val	Lys	Phe	Tyr	Phe	Tyr	
				695					700					705	
Glu	Arg	Ala	Lys	Arg	Asn	Phe	Gln	Glu	Glu	Gln	Ile	Asn	Thr	Arg	
				710					715					720	
Asp	Ala	Lys	Ala	Ile	Ala	Ala	Leu	Ile	Ser	Glu	Lys	Leu	Glu	Thr	
				725					730					735	
Leu	Arg	Asn	Gln	Gly	Lys	Arg	Asn	Lys	Asp	Glu	Leu				
				740					745						

<210> 460

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 460  
actccccagg ctgttcacac tgcc 24

<210> 461  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 461  
gatcagccag ccaataccag cagc 24

<210> 462  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 462  
gtggtgatga tagaatgctt tgccgaatga aaggagtcaa cagctatccc 50

<210> 463  
<211> 1818  
<212> DNA  
<213> Homo sapiens

<400> 463  
agacagtacc tcctccctag gactacacaa ggactgaacc agaaggaaga 50  
ggacagagca aagccatgaa catcatccta gaaatccttc tgcttctgat 100  
caccatcatc tactcctact tggagtcggt ggtgaagttt ttcattcctc 150  
agaggagaaa atctgtggct ggggagattg ttctcattac tggagctggg 200  
catggaatag gcaggcagac tacttatgaa tttgcaaaac gacagagcat 250  
attggttctg tgggatatta ataagcgcg tgtggaggaa actgcagctg 300  
agtgccgaaa actaggcgtc actgcgcatg cgtatgtggt agactgcagc 350  
aacagagaag agatctatcg ctctctaaat caggtgaaga aagaagtggg 400  
tgatgtaaca atcgtggtga ataatgctgg gacagtatat ccagccgatc 450  
ttctcagcac caaggatgaa gagattacca agacatttga ggtcaacatc 500  
ctaggacatt tttggatcac aaaagcactt cttccatcga tgatggagag 550  
aaatcatggc cacatcgtca cagtggcttc agtgtgcggc cacgaaggga 600  
ttccttacct catcccatat tgttccagca aatttgccgc tgttggcttt 650  
cacagaggtc tgacatcaga acttcaggcc ttgggaaaaa ctggtatcaa 700

aacctcatgt ctctgcccag tttttgtgaa tactgggttc accaaaaatc 750  
 caagcacaag attatggcct gtattggaga cagatgaagt cgtaagaagt 800  
 ctgatagatg gaatacttac caataagaaa atgatttttg ttccatcgta 850  
 tatcaatatc tttctgagac tacagaagtt tcttcctgaa cgcgccctcag 900  
 cgatttttaa tcgtatgcag aatattcaat ttgaagcagt ggttggccac 950  
 aaaatcaaaa tgaaatgaat aaataagctc cagccagaga tgtatgcatg 1000  
 ataatgatat gaatagtttc gaatcaatgc tgcaaagctt tatttcacat 1050  
 tttttcagtc ctgataatat taaaaacatt ggtttggcac tagcagcagt 1100  
 caaacgaaca agattaatta cctgtcttcc tgtttctcaa gaatatttac 1150  
 gtagtttttc ataggtctgt ttttccttcc atgcctctta aaaacttctg 1200  
 tgcttacata aacatactta aaagggtttc tttaagatat tttatttttc 1250  
 catttaaagg tggacaaaag ctacctccct aaaagtaaata acaaagagaa 1300  
 cttattttaca caggggaagg ttaagactgt tcaagtagca ttccaatctg 1350  
 tagccatgcc acagaatatc aacaagaaca cagaatgagt gcacagctaa 1400  
 gagatcaagt ttcagcaggc agctttatct caacctggac atatttttaag 1450  
 attcagcatt tgaaagattt ccctagcctc ttcctttttc attagcccaa 1500  
 aacggtgcaa ctctattctg gactttatta cttgattctg tcttctgtat 1550  
 aactctgaag tccaccaaaa gtggaccctc tatatttcct ccctttttat 1600  
 agtcttataa gatacattat gaaaggtgac cgactctatt ttaaattctca 1650  
 gaatttttaag ttctagcccc atgataacct ttttctttgt aatttatgct 1700  
 ttcatatatc cttggtccca gagatgttta gacaatttta ggctcaaaaa 1750  
 ttaaagctaa cacaggaaaa ggaactgtac tggctattac ataagaaaca 1800  
 atggacccaa gagaagaa 1818

<210> 464  
 <211> 300  
 <212> PRT  
 <213> Homo sapiens

<400> 464  
 Met Asn Ile Ile Leu Glu Ile Leu Leu Leu Leu Ile Thr Ile Ile  
 1 5 10 15  
 Tyr Ser Tyr Leu Glu Ser Leu Val Lys Phe Phe Ile Pro Gln Arg  
 20 25 30

Arg	Lys	Ser	Val	Ala	Gly	Glu	Ile	Val	Leu	Ile	Thr	Gly	Ala	Gly	
				35					40					45	
His	Gly	Ile	Gly	Arg	Gln	Thr	Thr	Tyr	Glu	Phe	Ala	Lys	Arg	Gln	
				50					55					60	
Ser	Ile	Leu	Val	Leu	Trp	Asp	Ile	Asn	Lys	Arg	Gly	Val	Glu	Glu	
				65					70					75	
Thr	Ala	Ala	Glu	Cys	Arg	Lys	Leu	Gly	Val	Thr	Ala	His	Ala	Tyr	
				80					85					90	
Val	Val	Asp	Cys	Ser	Asn	Arg	Glu	Glu	Ile	Tyr	Arg	Ser	Leu	Asn	
				95					100					105	
Gln	Val	Lys	Lys	Glu	Val	Gly	Asp	Val	Thr	Ile	Val	Val	Asn	Asn	
				110					115					120	
Ala	Gly	Thr	Val	Tyr	Pro	Ala	Asp	Leu	Leu	Ser	Thr	Lys	Asp	Glu	
				125					130					135	
Glu	Ile	Thr	Lys	Thr	Phe	Glu	Val	Asn	Ile	Leu	Gly	His	Phe	Trp	
				140					145					150	
Ile	Thr	Lys	Ala	Leu	Leu	Pro	Ser	Met	Met	Glu	Arg	Asn	His	Gly	
				155					160					165	
His	Ile	Val	Thr	Val	Ala	Ser	Val	Cys	Gly	His	Glu	Gly	Ile	Pro	
				170					175					180	
Tyr	Leu	Ile	Pro	Tyr	Cys	Ser	Ser	Lys	Phe	Ala	Ala	Val	Gly	Phe	
				185					190					195	
His	Arg	Gly	Leu	Thr	Ser	Glu	Leu	Gln	Ala	Leu	Gly	Lys	Thr	Gly	
				200					205					210	
Ile	Lys	Thr	Ser	Cys	Leu	Cys	Pro	Val	Phe	Val	Asn	Thr	Gly	Phe	
				215					220					225	
Thr	Lys	Asn	Pro	Ser	Thr	Arg	Leu	Trp	Pro	Val	Leu	Glu	Thr	Asp	
				230					235					240	
Glu	Val	Val	Arg	Ser	Leu	Ile	Asp	Gly	Ile	Leu	Thr	Asn	Lys	Lys	
				245					250					255	
Met	Ile	Phe	Val	Pro	Ser	Tyr	Ile	Asn	Ile	Phe	Leu	Arg	Leu	Gln	
				260					265					270	
Lys	Phe	Leu	Pro	Glu	Arg	Ala	Ser	Ala	Ile	Leu	Asn	Arg	Met	Gln	
				275					280					285	
Asn	Ile	Gln	Phe	Glu	Ala	Val	Val	Gly	His	Lys	Ile	Lys	Met	Lys	
				290					295					300	

<210> 465

<211> 1547

<212> DNA

<213> Homo sapiens

<400> 465

cggcggcggc tgcgggcgcg aggtgagggg cgcgaggtga ggggcgcgag 50  
gttcccagca ggatgccccg gctctgcagg aagctgaagt gagaggcccc 100  
gagaggggccc agcccgcccc gggcaggatg accaaggccc ggctgttccg 150  
gctgtggctg gtgctggggt cgggtgttcat gatcctgctg atcatcgtgt 200  
actgggacag cgcaggcgcc gcgcacttct acttgacacac gtccttctct 250  
aggccgcaca cggggccgcc gctgccacg cccgggcccg acagggacag 300  
ggagctcacg gccgactccg atgtcgacga gtttctggac aagtttctca 350  
gtgctggcgt gaagcagagc gaccttccca gaaaggagac ggagcagccg 400  
cctgcgccgg ggagcatgga ggagagcgtg agaggctacg actggtcccc 450  
gcgcgacgcc cggcgacgcc cagaccaggg ccggcagcag gcggagcgga 500  
ggagcgtgct gcggggcttc tgcgccaact ccagcctggc cttccccacc 550  
aaggagcgcg cattcgacga catccccaac tcggagctga gccacctgat 600  
cgtggacgac cggcacgggg ccatctactg ctacgtgcc aaggtggcct 650  
gcaccaactg gaagcgcgtg atgatogtgc tgagcggaag cctgctgcac 700  
cgcggtgcgc cctaccgga cccgtgcgc atccgcgcg agcacgtgca 750  
caacgccagc gcgcacctga ctttcaacaa gttctggcgc cgctacggga 800  
agctctcccc ccacctcatg aaggtcaagc tcaagaagta caccaagttc 850  
ctcttcgtgc gcgacccctt cgtgcgcctg atctccgct tccgcagcaa 900  
gttcgagctg gagaacgagg agttctaccg caagttcgcc gtgcccacgc 950  
tgcggtgta cgccaaccac accagcctgc ccgcctcgcc gcgcgaggcc 1000  
ttccgcgctg gcctcaaggt gtccttcgcc aacttcaccc agtacctgct 1050  
ggaccgcac acggagaagc tggcgccctt caacgagcac tggcggcagg 1100  
tgtaccgcct ctgccacccg tgccagatcg actacgactt cgtggggaag 1150  
ctggagactc tggacgagga cgccgcgcag ctgctgcagc tactccaggt 1200  
ggaccggcag ctccgcttcc ccccgagcta ccggaacagg accgccagca 1250  
gctgggagga ggactggttc gccaaagatcc cctggcctg gaggcagcag 1300  
ctgtataaac tctacgaggc cgactttgtt ctcttcggct accccaagcc 1350  
cgaaaacctc ctccgagact gaaagotttc gcgttgcttt ttctcgcgtg 1400  
cctggaacct gacgcacgcg cactccagtt tttttatgac ctacgatttt 1450

gcaatctggg cttcttgttc actccactgc ctctatccat tgagtactgt 1500

atcgatatgg ttttttaaga ttaatatatt tcaggtattt aatacga 1547

<210> 466

<211> 414

<212> PRT

<213> Homo sapiens

<400> 466

Met	Thr	Lys	Ala	Arg	Leu	Phe	Arg	Leu	Trp	Leu	Val	Leu	Gly	Ser
1				5					10					15

Val	Phe	Met	Ile	Leu	Leu	Ile	Ile	Val	Tyr	Trp	Asp	Ser	Ala	Gly
				20					25					30

Ala	Ala	His	Phe	Tyr	Leu	His	Thr	Ser	Phe	Ser	Arg	Pro	His	Thr
				35					40					45

Gly	Pro	Pro	Leu	Pro	Thr	Pro	Gly	Pro	Asp	Arg	Asp	Arg	Glu	Leu
				50					55					60

Thr	Ala	Asp	Ser	Asp	Val	Asp	Glu	Phe	Leu	Asp	Lys	Phe	Leu	Ser
				65					70					75

Ala	Gly	Val	Lys	Gln	Ser	Asp	Leu	Pro	Arg	Lys	Glu	Thr	Glu	Gln
				80					85					90

Pro	Pro	Ala	Pro	Gly	Ser	Met	Glu	Glu	Ser	Val	Arg	Gly	Tyr	Asp
				95					100					105

Trp	Ser	Pro	Arg	Asp	Ala	Arg	Arg	Ser	Pro	Asp	Gln	Gly	Arg	Gln
				110					115					120

Gln	Ala	Glu	Arg	Arg	Ser	Val	Leu	Arg	Gly	Phe	Cys	Ala	Asn	Ser
				125					130					135

Ser	Leu	Ala	Phe	Pro	Thr	Lys	Glu	Arg	Ala	Phe	Asp	Asp	Ile	Pro
				140					145					150

Asn	Ser	Glu	Leu	Ser	His	Leu	Ile	Val	Asp	Asp	Arg	His	Gly	Ala
				155					160					165

Ile	Tyr	Cys	Tyr	Val	Pro	Lys	Val	Ala	Cys	Thr	Asn	Trp	Lys	Arg
				170					175					180

Val	Met	Ile	Val	Leu	Ser	Gly	Ser	Leu	Leu	His	Arg	Gly	Ala	Pro
				185					190					195

Tyr	Arg	Asp	Pro	Leu	Arg	Ile	Pro	Arg	Glu	His	Val	His	Asn	Ala
				200					205					210

Ser	Ala	His	Leu	Thr	Phe	Asn	Lys	Phe	Trp	Arg	Arg	Tyr	Gly	Lys
				215					220					225

Leu	Ser	Arg	His	Leu	Met	Lys	Val	Lys	Leu	Lys	Lys	Tyr	Thr	Lys
				230					235					240

Phe	Leu	Phe	Val	Arg	Asp	Pro	Phe	Val	Arg	Leu	Ile	Ser	Ala	Phe	
				245					250					255	
Arg	Ser	Lys	Phe	Glu	Leu	Glu	Asn	Glu	Glu	Phe	Tyr	Arg	Lys	Phe	
				260					265					270	
Ala	Val	Pro	Met	Leu	Arg	Leu	Tyr	Ala	Asn	His	Thr	Ser	Leu	Pro	
				275					280					285	
Ala	Ser	Ala	Arg	Glu	Ala	Phe	Arg	Ala	Gly	Leu	Lys	Val	Ser	Phe	
				290					295					300	
Ala	Asn	Phe	Ile	Gln	Tyr	Leu	Leu	Asp	Pro	His	Thr	Glu	Lys	Leu	
				305					310					315	
Ala	Pro	Phe	Asn	Glu	His	Trp	Arg	Gln	Val	Tyr	Arg	Leu	Cys	His	
				320					325					330	
Pro	Cys	Gln	Ile	Asp	Tyr	Asp	Phe	Val	Gly	Lys	Leu	Glu	Thr	Leu	
				335					340					345	
Asp	Glu	Asp	Ala	Ala	Gln	Leu	Leu	Gln	Leu	Leu	Gln	Val	Asp	Arg	
				350					355					360	
Gln	Leu	Arg	Phe	Pro	Pro	Ser	Tyr	Arg	Asn	Arg	Thr	Ala	Ser	Ser	
				365					370					375	
Trp	Glu	Glu	Asp	Trp	Phe	Ala	Lys	Ile	Pro	Leu	Ala	Trp	Arg	Gln	
				380					385					390	
Gln	Leu	Tyr	Lys	Leu	Tyr	Glu	Ala	Asp	Phe	Val	Leu	Phe	Gly	Tyr	
				395					400					405	
Pro	Lys	Pro	Glu	Asn	Leu	Leu	Arg	Asp							
				410											

<210> 467  
 <211> 1071  
 <212> DNA  
 <213> Homo sapiens

<400> 467  
 tcgggccaga attcggcacg aggcggcacg agggcgacgg cctcacgggg 50  
 ctttggaggt gaaagaggcc cagagtagag agagagagag accgacgtac 100  
 acgggatggc tacgggaacg cgctatgccg ggaaggtggt ggtcgtgacc 150  
 gggggcgggc gcggcatcgg agctgggatc gtgcgcgcct tcgtgaacag 200  
 cggggcccga gtggttatct gcgacaagga tgagtctggg ggccggggccc 250  
 tggagcagga gctccctgga gctgtcttta tcctctgtga tgtgactcag 300  
 gaagatgatg tgaagaccct ggtttctgag accatccgcc gatttggccg 350  
 cctggattgt gttgtcaaca acgctggcca ccaccaccc ccacagaggc 400

ctgaggagac ctctgcccag ggattccgcc agctgctgga gctgaacctta 450  
 ctggggacgt acaccttgac caagctcgcc ctcccctacc tgcggaagag 500  
 tcaaggaat gtcataca tctccagcct ggtgggggca atcgccagg 550  
 cccaggcagt tccctatgtg gccaccaagg gggcagtaac agccatgacc 600  
 aaagctttgg ccctggatga aagtccatat ggtgtccgag tcaactgtat 650  
 ctccccagga aacatctgga ccccgctgtg ggaggagctg gcagccttaa 700  
 tgccagaccc tagggccaca atccgagagg gcatgctggc ccagccactg 750  
 ggccgcatgg gccagcccgc tgaggtcggg gctgcggcag tgttcctggc 800  
 ctccgaagcc aacttctgca cgggcattga actgctcgtg acgggggggtg 850  
 cagagctggg gtacgggtgc aaggccagtc ggagcacccc cgtggacgcc 900  
 cccgatatcc ctctctgatt tctctcattt ctacttgggg cccccttcct 950  
 aggactctcc caccccaac tccaacctgt atcagatgca gcccacaagc 1000  
 ccttagactc taagcccagt tagcaagggt ccgggtcacc ctgcagggtc 1050  
 ccataaaaac gatttgcagc c 1071

<210> 468  
 <211> 270  
 <212> PRT  
 <213> Homo sapiens

<400> 468  
 Met Ala Thr Gly Thr Arg Tyr Ala Gly Lys Val Val Val Val Thr  
 1 5 10 15  
 Gly Gly Gly Arg Gly Ile Gly Ala Gly Ile Val Arg Ala Phe Val  
 20 25 30  
 Asn Ser Gly Ala Arg Val Val Ile Cys Asp Lys Asp Glu Ser Gly  
 35 40 45  
 Gly Arg Ala Leu Glu Gln Glu Leu Pro Gly Ala Val Phe Ile Leu  
 50 55 60  
 Cys Asp Val Thr Gln Glu Asp Asp Val Lys Thr Leu Val Ser Glu  
 65 70 75  
 Thr Ile Arg Arg Phe Gly Arg Leu Asp Cys Val Val Asn Asn Ala  
 80 85 90  
 Gly His His Pro Pro Pro Gln Arg Pro Glu Glu Thr Ser Ala Gln  
 95 100 105  
 Gly Phe Arg Gln Leu Leu Glu Leu Asn Leu Leu Gly Thr Tyr Thr  
 110 115 120

Leu Thr Lys Leu Ala Leu Pro Tyr Leu Arg Lys Ser Gln Gly Asn	125	130	135
Val Ile Asn Ile Ser Ser Leu Val Gly Ala Ile Gly Gln Ala Gln	140	145	150
Ala Val Pro Tyr Val Ala Thr Lys Gly Ala Val Thr Ala Met Thr	155	160	165
Lys Ala Leu Ala Leu Asp Glu Ser Pro Tyr Gly Val Arg Val Asn	170	175	180
Cys Ile Ser Pro Gly Asn Ile Trp Thr Pro Leu Trp Glu Glu Leu	185	190	195
Ala Ala Leu Met Pro Asp Pro Arg Ala Thr Ile Arg Glu Gly Met	200	205	210
Leu Ala Gln Pro Leu Gly Arg Met Gly Gln Pro Ala Glu Val Gly	215	220	225
Ala Ala Ala Val Phe Leu Ala Ser Glu Ala Asn Phe Cys Thr Gly	230	235	240
Ile Glu Leu Leu Val Thr Gly Gly Ala Glu Leu Gly Tyr Gly Cys	245	250	255
Lys Ala Ser Arg Ser Thr Pro Val Asp Ala Pro Asp Ile Pro Ser	260	265	270

<210> 469  
 <211> 687  
 <212> DNA  
 <213> Homo sapiens

<400> 469  
 aggcgggcag cagctgcagg ctgaccttgc agcttggcgg aatggactgg 50  
 cctcacaaacc tgctgtttct tcttaccatt tccatcttcc tggggctggg 100  
 ccagcccagg agccccaaaa gcaagaggaa ggggcaagg cggcctgggc 150  
 ccctggcccc tggccctcac caggtgccac tggacctggt gtcacgatg 200  
 aaaccgtatg cccgcatgga ggagtatgag aggaacatcg aggagatggt 250  
 ggcccagctg aggaacagct cagagctggc ccagagaaag tgtgaggtca 300  
 acttgcagct gtggatgtcc aacaagagga gcctgtctcc ctggggctac 350  
 agcatcaacc acgaccccag ccgtatcccc gtggacctgc cggaggcacg 400  
 gtgcctgtgt ctgggctgtg tgaaccctt caccatgcag gaggaccgca 450  
 gcatggtgag cgtgccggtg ttcagccagg ttctgtgcg ccgccgcctc 500  
 tgcccgccac cgccccgcac agggccttgc cgccagcgcg cagtcatgga 550



gaccatcgct gtgggctgca cctgcatctt ctgaatcacc tggcccagaa 600  
gccaggccag cagcccgaga ccatactcct tgcacctttg tgccaagaaa 650  
ggcctatgaa aagtaaacac tgacttttga aagcaag 687

<210> 470  
<211> 180  
<212> PRT  
<213> Homo sapiens

<400> 470  
Met Asp Trp Pro His Asn Leu Leu Phe Leu Leu Thr Ile Ser Ile  
1 5 10 15  
Phe Leu Gly Leu Gly Gln Pro Arg Ser Pro Lys Ser Lys Arg Lys  
20 25 30  
Gly Gln Gly Arg Pro Gly Pro Leu Ala Pro Gly Pro His Gln Val  
35 40 45  
Pro Leu Asp Leu Val Ser Arg Met Lys Pro Tyr Ala Arg Met Glu  
50 55 60  
Glu Tyr Glu Arg Asn Ile Glu Glu Met Val Ala Gln Leu Arg Asn  
65 70 75  
Ser Ser Glu Leu Ala Gln Arg Lys Cys Glu Val Asn Leu Gln Leu  
80 85 90  
Trp Met Ser Asn Lys Arg Ser Leu Ser Pro Trp Gly Tyr Ser Ile  
95 100 105  
Asn His Asp Pro Ser Arg Ile Pro Val Asp Leu Pro Glu Ala Arg  
110 115 120  
Cys Leu Cys Leu Gly Cys Val Asn Pro Phe Thr Met Gln Glu Asp  
125 130 135  
Arg Ser Met Val Ser Val Pro Val Phe Ser Gln Val Pro Val Arg  
140 145 150  
Arg Arg Leu Cys Pro Pro Pro Pro Arg Thr Gly Pro Cys Arg Gln  
155 160 165  
Arg Ala Val Met Glu Thr Ile Ala Val Gly Cys Thr Cys Ile Phe  
170 175 180

<210> 471  
<211> 2368  
<212> DNA  
<213> Homo sapiens

<400> 471  
gcgcccgcag gcgtaggcgg ggtggccctt gcgtctcccg cttccttgaa 50  
aaacccggcg ggcgagcgag gctgcgggcc ggccgctgcc cttccccaca 100

ctccccgccg agaagcctcg ctcggcgccc aacatggcgg gtgggcgctg 150  
 cggcccgcag ctaacggcgc tcttggccgc ctggatcgcg gctgtggcgg 200  
 cgacggcagg ccccgaggag gccgcgctgc cgccggagca gagccgggtc 250  
 cagcccatga ccgcctccaa ctggacgctg gtgatggagg gcgagtggat 300  
 gctgaaatct tacgccccat ggtgtccatc ctgccagcag actgattcag 350  
 aatgggaggc ttttgcaaag aatggtgaaa tacttcagat cagtgtgggg 400  
 aaggtagatg tcattcaaga accaggtttg agtggccgct tctttgtcac 450  
 cactctccca gcattttttc atgcaaagga tgggatattc cgccgttata 500  
 gtggcccagg aatcttcgaa gacctgcaga attatatctt agagaagaaa 550  
 tggcaatcag tcgagcctct gactggctgg aaatcccag cttctctaac 600  
 gatgtctgga atggctggtc tttttagcat ctctggcaag atatggcatc 650  
 ttcacaacta tttcacagtg actcttggaa ttcttgcttg gtgttcttat 700  
 gtgtttttcg tcatagccac cttggttttt ggctttttta tgggtctggt 750  
 cttggtggta atatcagaat gtttctatgt gccacttcca aggcatttat 800  
 ctgagcgttc tgagcagaat cggagatcag aggaggctca tagagctgaa 850  
 cagttgcagg atgcggagga ggaaaaagat gattcaaatg aagaagaaaa 900  
 caaagacagc cttgtagatg atgaagaaga gaaagaagat cttggcgatg 950  
 aggatgaagc agaggaagaa gaggaggagg acaacttggc tgctggtgtg 1000  
 gatgaggaga gaagtgaggc caatgatcag gggccccag gagaggacgg 1050  
 tgtgaccggg gaggaagtag agcctgagga ggctgaagaa ggcattctctg 1100  
 agcaaccctg cccagctgac acagagggtg tggaagactc cttgaggcag 1150  
 cgtaaaaagtc agcatgctga caagggactg tagatttaat gatgcgtttt 1200  
 caagaatata caccaaaaaca atatgtcagc ttccctttgg cctgcagttt 1250  
 gtaccaaata ctttaattttt cctgaatgag caagcttctc ttaaaagatg 1300  
 ctctctagtc atttggctctc atggcagtaa gcctcatgta tactaaggag 1350  
 agtcttccag gtgtgacaat caggatatag aaaaacaaac gtagtgtttg 1400  
 gatctgtttg gagactggga tgggaacaag ttcatttact taggggtcag 1450  
 agagtctcga ccagaggagg ccattcccag tcctaatacag caccttccag 1500  
 agacaaggct gcaggccctg tgaaatgaaa gccaagcagg agccttggct 1550

cctgagcatc cccaaagtgt aacgtagaag ccttgcaccc ttttcttggtg 1600  
 taaagtatatt atttttgtca aattgcagga aacatcaggc accacagtgc 1650  
 atgaaaaatc tttcacagct agaaattgaa agggccttgg gtatagagag 1700  
 cagctcagaa gtcaccccag ccctctgaat ctctgtgct atgttttatt 1750  
 tcttaccttt aatttttcca gcattttcac catgggcatt caggctctcc 1800  
 acactcttca ctattatctc ttggctcagag gactccaata acagccaggt 1850  
 ttacatgaac tgtgtttgtt cattctgacc taaggggttt agataatcag 1900  
 taaccataac ccctgaagct gtgactgcc aacatctcaa atgaaatgtt 1950  
 gtggccatca gagactcaaa aggaagtaag gattttacaa gacagattaa 2000  
 aaaaaaattg ttttgtccaa aatatagttg ttgttgattt ttttttaagt 2050  
 tttctaagca atatttttca agccagaagt cctctaagtc ttgccagtac 2100  
 aaggtagtct tgtgaagaaa agttgaatac tgttttgatt tcatctcaag 2150  
 gggttccctg ggtcttgaac tactttaata ataactaaaa aaccacttct 2200  
 gattttcctt cagtgatgtg cttttggtga aagaattaat gaactccagt 2250  
 acctgaaagt gaaagatttg attttgtttc catcttctgt aatcttccaa 2300  
 agaattatat ctttgtaaatt ctctcaatac tcaatctact gtaagtaccc 2350  
 agggaggcta atttcttt 2368

<210> 472

<211> 349

<212> PRT

<213> Homo sapiens

<400> 472

Met	Ala	Gly	Gly	Arg	Cys	Gly	Pro	Gln	Leu	Thr	Ala	Leu	Leu	Ala
1				5					10					15

Ala	Trp	Ile	Ala	Ala	Val	Ala	Ala	Thr	Ala	Gly	Pro	Glu	Glu	Ala
			20						25					30

Ala	Leu	Pro	Pro	Glu	Gln	Ser	Arg	Val	Gln	Pro	Met	Thr	Ala	Ser
				35					40					45

Asn	Trp	Thr	Leu	Val	Met	Glu	Gly	Glu	Trp	Met	Leu	Lys	Phe	Tyr
			50						55					60

Ala	Pro	Trp	Cys	Pro	Ser	Cys	Gln	Gln	Thr	Asp	Ser	Glu	Trp	Glu
			65						70					75

Ala	Phe	Ala	Lys	Asn	Gly	Glu	Ile	Leu	Gln	Ile	Ser	Val	Gly	Lys
			80						85					90

Val	Asp	Val	Ile	Gln	Glu	Pro	Gly	Leu	Ser	Gly	Arg	Phe	Phe	Val	95	100	105
Thr	Thr	Leu	Pro	Ala	Phe	Phe	His	Ala	Lys	Asp	Gly	Ile	Phe	Arg	110	115	120
Arg	Tyr	Arg	Gly	Pro	Gly	Ile	Phe	Glu	Asp	Leu	Gln	Asn	Tyr	Ile	125	130	135
Leu	Glu	Lys	Lys	Trp	Gln	Ser	Val	Glu	Pro	Leu	Thr	Gly	Trp	Lys	140	145	150
Ser	Pro	Ala	Ser	Leu	Thr	Met	Ser	Gly	Met	Ala	Gly	Leu	Phe	Ser	155	160	165
Ile	Ser	Gly	Lys	Ile	Trp	His	Leu	His	Asn	Tyr	Phe	Thr	Val	Thr	170	175	180
Leu	Gly	Ile	Pro	Ala	Trp	Cys	Ser	Tyr	Val	Phe	Phe	Val	Ile	Ala	185	190	195
Thr	Leu	Val	Phe	Gly	Leu	Phe	Met	Gly	Leu	Val	Leu	Val	Val	Ile	200	205	210
Ser	Glu	Cys	Phe	Tyr	Val	Pro	Leu	Pro	Arg	His	Leu	Ser	Glu	Arg	215	220	225
Ser	Glu	Gln	Asn	Arg	Arg	Ser	Glu	Glu	Ala	His	Arg	Ala	Glu	Gln	230	235	240
Leu	Gln	Asp	Ala	Glu	Glu	Glu	Lys	Asp	Asp	Ser	Asn	Glu	Glu	Glu	245	250	255
Asn	Lys	Asp	Ser	Leu	Val	Asp	Asp	Glu	Glu	Glu	Lys	Glu	Asp	Leu	260	265	270
Gly	Asp	Glu	Asp	Glu	Ala	Glu	Glu	Glu	Glu	Glu	Glu	Asp	Asn	Leu	275	280	285
Ala	Ala	Gly	Val	Asp	Glu	Glu	Arg	Ser	Glu	Ala	Asn	Asp	Gln	Gly	290	295	300
Pro	Pro	Gly	Glu	Asp	Gly	Val	Thr	Arg	Glu	Glu	Val	Glu	Pro	Glu	305	310	315
Glu	Ala	Glu	Glu	Gly	Ile	Ser	Glu	Gln	Pro	Cys	Pro	Ala	Asp	Thr	320	325	330
Glu	Val	Val	Glu	Asp	Ser	Leu	Arg	Gln	Arg	Lys	Ser	Gln	His	Ala	335	340	345

Asp Lys Gly Leu

<210> 473

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 473  
gtccagccca tgaccgcctc caac 24

<210> 474  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 474  
ctctcctcat ccacaccagc agcc 24

<210> 475  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 475  
gtggatgctg aaattttacg ccccatgggtg tccatcctgc cagc 44

<210> 476  
<211> 2478  
<212> DNA  
<213> Homo sapiens

<400> 476  
atctggttga actacttaag cttaatttgt taaactccgg taagtaccta 50  
gccacatga tttgactcag agattotott ttgtccacag acagtcattct 100  
caggggcaga aagaaaagag ctcccaaag ctatatctat tcaggggctc 150  
tcaagaacaa tggaatatca tcctgattta gaaaatttgg atgaagatgg 200  
atatactcaa ttacacttcg actctcaaag caataccagg atagctgttg 250  
tttcagagaa aggatcgtgt gctgcatctc ctccttggcg cctcattgct 300  
gtaatttttg gaatcctatg cttggtaata ctggtgatag ctgtggtcct 350  
gggtaccatg ggggttcttt ccagcccttg tcctcctaatt tggattatat 400  
atgagaagag ctgttatcta ttcagcatgt cactaaattc ctgggatgga 450  
agtaaaagac aatgctggca actgggctct aatctcctaa agatagacag 500  
ctcaaagaa ttgggattta tagtaaaaca agtgtcttcc caacctgata 550  
attcattttg gataggcctt tctcggcccc agactgaggt accatggctc 600

tgggaggatg gatcaacatt ctcttctaac ttatttcaga tcagaaccac 650  
 agctacccaa gaaaacccat ctccaaattg tgtatggatt cacgtgtcag 700  
 tcatttatga ccaactgtgt agtgtgccct catatagtat ttgtgagaag 750  
 aagttttcaa tgtaagagga aggggtggaga aggagagaga aatatgtgag 800  
 gtagtaagga ggacagaaaa cagaacagaa aagagtaaca gctgaggtca 850  
 agataaatgc agaaaatgtt tagagagctt ggccaactgt aatcttaacc 900  
 aagaaattga agggagagggc tgtgatttct gtatttgtcg acctacaggt 950  
 aggctagtat tatttttcta gttagtagat ccctagacat ggaatcaggg 1000  
 cagccaagct tgagttttta ttttttattt atttattttt ttgagatagg 1050  
 gtctcacttt gttacccagg ctggagtga gtggcacaat ctgactcac 1100  
 tgcagctatc tctcgccca gccctcaag tagctgggac tacaggtgca 1150  
 tgccaccatg ccaggctaata ttttggtgtt tttttagag actgggtttt 1200  
 gccatgttga ccaagctggt ctctaactcc tgggcttaag tgatctgccc 1250  
 gccttggcct cccaaagtgc tgggattaca gatgtgagcc accacacctg 1300  
 gcccgaagct tgaattttca ttctgccatt gacttggcat ttaccttggg 1350  
 taagccataa gcgaatctta atttctggct ctatcagagt tgtttcatgc 1400  
 tcaacaatgc cattgaagtg cacggtgtgt tgccacgatt tgaccctcaa 1450  
 cttctagcag tatatcagtt atgaactgag ggtgaaatat atttctgaat 1500  
 agctaaatga agaaatggga aaaaatotto accacagtca gagcaatttt 1550  
 attattttca tcagtatgat cataattatg attatcatct tagtaaaaag 1600  
 caggaactcc tactttttct ttatcaatta aatagctcag agagtacatc 1650  
 tgccatatct ctaatagaat cttttttttt tttttttttt tttgagacag 1700  
 agtttcgctc ttgttgccca ggctggagtg caacggcacg atctcggctc 1750  
 accgcaacct ccgccccctg ggttcaagca attctcctgc ctgagcctcc 1800  
 caagtagctg ggattacagt caggcaccac cacacccggc taattttgta 1850  
 tttttttagt agagacaggg tttctccatg tcggtcaggg tagtcccgaa 1900  
 ctctgacct caagtgatct gcctgcctcg gcctcccaag tgctgggatt 1950  
 acaggcgtga gccactgcac ccagcctaga atcttgata atatgtaatt 2000  
 gtagggaaac tgctctcata ggaaagtttt ctgcttttta aatacaaaaa 2050

tacataaaaa tacataaaat ctgatgatga atataaaaaa gtaaccaacc 2100  
tcattggaac aagtattaac attttggaaat atgttttatt agttttgtga 2150  
tgtactgttt tacaattttt accattttttt tcagtaatta ctgtaaaatg 2200  
gtattattgg aatgaaacta tatttcctca tgtgctgatt tgtcttattt 2250  
ttttcatact ttcccactgg tgctattttt atttccaatg gatatttctg 2300  
tattactagg gaggcattta cagtcctcta atgttgatta atatgtgaaa 2350  
agaaattgta ccaattttac taaattatgc agttttaaataat ggatgatttt 2400  
atgttatgtg gatttcattt caataaaaaa aaactcttat caaaaaaaaaa 2450  
aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2478

<210> 477

<211> 201

<212> PRT

<213> Homo sapiens

<400> 477

Met	Glu	Tyr	His	Pro	Asp	Leu	Glu	Asn	Leu	Asp	Glu	Asp	Gly	Tyr	1	5	10	15
Thr	Gln	Leu	His	Phe	Asp	Ser	Gln	Ser	Asn	Thr	Arg	Ile	Ala	Val	20	25	30	
Val	Ser	Glu	Lys	Gly	Ser	Cys	Ala	Ala	Ser	Pro	Pro	Trp	Arg	Leu	35	40	45	
Ile	Ala	Val	Ile	Leu	Gly	Ile	Leu	Cys	Leu	Val	Ile	Leu	Val	Ile	50	55	60	
Ala	Val	Val	Leu	Gly	Thr	Met	Gly	Val	Leu	Ser	Ser	Pro	Cys	Pro	65	70	75	
Pro	Asn	Trp	Ile	Ile	Tyr	Glu	Lys	Ser	Cys	Tyr	Leu	Phe	Ser	Met	80	85	90	
Ser	Leu	Asn	Ser	Trp	Asp	Gly	Ser	Lys	Arg	Gln	Cys	Trp	Gln	Leu	95	100	105	
Gly	Ser	Asn	Leu	Leu	Lys	Ile	Asp	Ser	Ser	Asn	Glu	Leu	Gly	Phe	110	115	120	
Ile	Val	Lys	Gln	Val	Ser	Ser	Gln	Pro	Asp	Asn	Ser	Phe	Trp	Ile	125	130	135	
Gly	Leu	Ser	Arg	Pro	Gln	Thr	Glu	Val	Pro	Trp	Leu	Trp	Glu	Asp	140	145	150	
Gly	Ser	Thr	Phe	Ser	Ser	Asn	Leu	Phe	Gln	Ile	Arg	Thr	Thr	Ala	155	160	165	
Thr	Gln	Glu	Asn	Pro	Ser	Pro	Asn	Cys	Val	Trp	Ile	His	Val	Ser				

170

175

180

Val Ile Tyr Asp Gln Leu Cys Ser Val Pro Ser Tyr Ser Ile Cys  
 185 190 195

Glu Lys Lys Phe Ser Met  
 200

&lt;210&gt; 478

&lt;211&gt; 27

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 478

gtccacagac agtcatctca ggagcag 27

&lt;210&gt; 479

&lt;211&gt; 20

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 479

acaagtgtct tcccaacctg 20

&lt;210&gt; 480

&lt;211&gt; 24

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 480

atcctcccag agccatggta cctc 24

&lt;210&gt; 481

&lt;211&gt; 51

&lt;212&gt; DNA

&lt;213&gt; Artificial Sequence

&lt;220&gt;

&lt;223&gt; Synthetic oligonucleotide probe

&lt;400&gt; 481

ccaaggatag ctgttgtttc agagaaagga tcgtgtgctg catctcctcc 50

t 51

&lt;210&gt; 482

&lt;211&gt; 3819

&lt;212&gt; DNA

&lt;213&gt; Homo sapiens



<400> 482

ggaaggggag gagcaggcca cacaggcaca ggccggtgag ggacctgccc 50  
agacctggag ggtctcgtc tgtcacacag gctggagtgc agtgggtgtga 100  
tcttggtca tcgtaacctc cacctcccgg gttcaagtga ttctcatgcc 150  
tcagcctccc gagtagctgg gattacaggt ggtgacttcc aagagtgact 200  
ccgtcggagg aaaatgactc ccagtcgct gctgcagacg aactgttcc 250  
tgctgagtct gctcttctg gtccaagggtg cccacggcag gggccacagg 300  
gaagactttc gcttctgcag ccagcggaa cagacacaca ggagcagcct 350  
ccactacaaa cccacaccag acctgcgcat ctccatcgag aactccgaag 400  
aggccctcac agtccatgcc cctttccctg cagcccaccc tgcttcccga 450  
tccttccctg accccagggg cctctaccac ttctgctct actggaaccg 500  
acatgctggg agattacatc ttctctatgg caagcgtgac ttcttgctga 550  
gtgacaaagc ctctagcctc ctctgcttcc agcaccagga ggagagcctg 600  
gctcagggcc ccccgctgtt agccacttct gtcacctct ggtggagccc 650  
tcagaacatc agcctgcccag gtgccgccag ctccaccttc tccttccaca 700  
gtcctcccca cagggccgct cacaatgcct cgggtggacat gtgcgagctc 750  
aaaagggacc tccagctgct cagccagttc ctgaagcatc cccagaaggc 800  
ctcaaggagg ccctcggctg ccccgccag ccagcagttg cagagcctgg 850  
agtcgaaact gacctctgtg agattcatgg gggacatggt gtccttcgag 900  
gaggaccgga tcaacgccac ggtgtggaag ctccagcca cagccggcct 950  
ccaggacctg cacatccact cccggcagga ggaggagcag agcgagatca 1000  
tggagtactc ggtgctgctg cctcgaacac tottccagag gacgaaaggc 1050  
cggagcgggg aggctgagaa gagactcctc ctggtggact tcagcagcca 1100  
agccctgttc caggacaaga attccagcca agtcctgggt gagaaggctc 1150  
tggggattgt ggtacagaac accaaagtag ccaacctcac ggagcccgtg 1200  
gtgctcactt tccagcacca gctacagccg aagaatgtga ctctgcaatg 1250  
tgtgttctgg gttgaagacc ccacattgag cagcccgggg cattggagca 1300  
gtgctgggtg tgagaccgtc aggagagaaa cccaacatc ctgcttctgc 1350  
aaccacttga cctactttgc agtgcgtgatg gtctcctcgg tggaggtgga 1400  
cgccgtgcac aagcactacc tgagcctcct ctccctacgtg ggctgtgtcg 1450

tctctgccct ggcctgcctt gtcaccattg cgcctacct ctgctccagg 1500  
gtgcccctgc cgtgcaggag gaaacctcgg gactacacca tcaagggtgca 1550  
catgaacctg ctgctggccg tcttctctgt ggacacgagc ttctctgtca 1600  
gcgagccggt ggccttgaca ggctctgagg ctggctgccg agccagtgcc 1650  
atcttctctgc acttctccct gctcacctgc ctttcttgga tgggcctcga 1700  
ggggtacaac ctctaccgac tcgtggtgga ggtctttggc acctatgtcc 1750  
ctggctacct actcaagctg agcgccatgg gctggggctt ccccatcttt 1800  
ctggtgacgc tgggtggcct ggtggatgtg gacaactatg gccccatcat 1850  
cttggctgtg cataggactc cagagggcgt catctaccct tccatgtgct 1900  
ggatccggga ctccctggtc agctacatca ccaacctggg cctcttcagc 1950  
ctgggtgtttc tgttcaacat ggccatgcta gccaccatgg tgggtgcagat 2000  
cctgcggctg cgtccccaca cccaaaagtg gtcacatgtg ctgacactgc 2050  
tgggcctcag cctggctcct ggcctgcctt gggccttgat cttcttctcc 2100  
tttgcttctg gcaccttcca gcttgctgct ctctaccttt tcagcatcat 2150  
cacctccttc caaggcttcc tcatcttcat ctggtactgg tccatgcggc 2200  
tgcaggcccg ggggtggccc tccctctga agagcaactc agacagcgcc 2250  
aggtcccca tcagctoggg cagcacctcg tccagccgca tctaggcctc 2300  
cagcccacct gccatgtga tgaagcagag atgcggcctc gtcgcacact 2350  
gcctgtggcc ccgagccag gccagcccc aggcagtcg gccgcagact 2400  
ttggaaagcc caacgacct ggagagatgg gccgttgcca tgggtggacgg 2450  
actcccgggc tgggcttttg aattggcctt ggggactact cggctctcac 2500  
tcagctccca cgggactcag aagtgcgccg ccatgctgcc tagggtactg 2550  
tccccacatc tgtcccaacc cagctggagg cctggtctct cttacaacc 2600  
cctgggcccc gccctcattg ctgggggcca ggccttgat cttgagggtc 2650  
tggcacatcc ttaatcctgt gccctgcct gggacagaaa tgtggctcca 2700  
gttgctctgt ctctcgtggt caccctgagg gcactctgca tcctctgtca 2750  
ttttaacctc aggtggcacc cagggcgaat ggggccagc gcagaccttc 2800  
agggccagag ccctggcgga ggagaggccc ttgcccagga gcacagcagc 2850  
agctcgcta cctctgagcc caggccccct ccctccctca gccccccagt 2900

cctccctcca tcttccctgg ggttctctct ctctcccagg gcctccttgc 2950  
 tccttcgttc acagctgggg gtccccgatt ccaatgctgt tttttgggga 3000  
 gtggtttcca ggagctgcct ggtgtctgct gtaaagtgtt gtctactgca 3050  
 caagcctcgg cctgccccctg agccaggctc ggtaccgatg cgtgggctgg 3100  
 gctaggtccc tctgtccatc tgggcctttg tatgagctgc attgcccttg 3150  
 ctcaccctga ccaagcacac gcctcagagg ggcctcagc ctctcctgaa 3200  
 gccctcttgt ggcaagaact gtggaccatg ccagtcccgt ctggtttcca 3250  
 tcccaccact ccaaggactg agaactgacct cctctggtga cactggccta 3300  
 gagcctgaca ctctcctaag aggttctctc caagcccca aatagctcca 3350  
 ggcgccctcg gccgcccac atggttaatt ctgtccaaca aacacacacg 3400  
 ggtagattgc tggcctgttg taggtggtag ggacacagat gaccgacctg 3450  
 gtcactcctc ctgccaacat tcagtctggt atgtgaggcg tgcgtgaagc 3500  
 aagaactcct ggagctacag ggacagggag ccattcattcc tgcctgggaa 3550  
 tcctggaaga ctctctgcag gagtcagcgt tcaatcttga ccttgaagat 3600  
 gggaaggatg ttctttttac gtaccaattc ttttgtcttt tgatattaaa 3650  
 aagaagtaca tgttcattgt agagaatttg gaaactgtag aagagaatca 3700  
 agaagaaaaa taaaaatcag ctgttgtaat cgcctagcaa aaaaaaaaaa 3750  
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 3800  
 aaaaaaaaaa aaaaaaaaaa 3819

<210> 483  
 <211> 693  
 <212> PRT  
 <213> Homo sapiens

<400> 483  
 Met Thr Pro Gln Ser Leu Leu Gln Thr Thr Leu Phe Leu Leu Ser  
 1 5 10 15  
 Leu Leu Phe Leu Val Gln Gly Ala His Gly Arg Gly His Arg Glu  
 20 25 30  
 Asp Phe Arg Phe Cys Ser Gln Arg Asn Gln Thr His Arg Ser Ser  
 35 40 45  
 Leu His Tyr Lys Pro Thr Pro Asp Leu Arg Ile Ser Ile Glu Asn  
 50 55 60  
 Ser Glu Glu Ala Leu Thr Val His Ala Pro Phe Pro Ala Ala His  
 65 70 75

Pro	Ala	Ser	Arg	Ser	Phe	Pro	Asp	Pro	Arg	Gly	Leu	Tyr	His	Phe	
				80					85					90	
Cys	Leu	Tyr	Trp	Asn	Arg	His	Ala	Gly	Arg	Leu	His	Leu	Leu	Tyr	
				95					100					105	
Gly	Lys	Arg	Asp	Phe	Leu	Leu	Ser	Asp	Lys	Ala	Ser	Ser	Leu	Leu	
				110					115					120	
Cys	Phe	Gln	His	Gln	Glu	Glu	Ser	Leu	Ala	Gln	Gly	Pro	Pro	Leu	
				125					130					135	
Leu	Ala	Thr	Ser	Val	Thr	Ser	Trp	Trp	Ser	Pro	Gln	Asn	Ile	Ser	
				140					145					150	
Leu	Pro	Ser	Ala	Ala	Ser	Phe	Thr	Phe	Ser	Phe	His	Ser	Pro	Pro	
				155					160					165	
His	Thr	Ala	Ala	His	Asn	Ala	Ser	Val	Asp	Met	Cys	Glu	Leu	Lys	
				170					175					180	
Arg	Asp	Leu	Gln	Leu	Leu	Ser	Gln	Phe	Leu	Lys	His	Pro	Gln	Lys	
				185					190					195	
Ala	Ser	Arg	Arg	Pro	Ser	Ala	Ala	Pro	Ala	Ser	Gln	Gln	Leu	Gln	
				200					205					210	
Ser	Leu	Glu	Ser	Lys	Leu	Thr	Ser	Val	Arg	Phe	Met	Gly	Asp	Met	
				215					220					225	
Val	Ser	Phe	Glu	Glu	Asp	Arg	Ile	Asn	Ala	Thr	Val	Trp	Lys	Leu	
				230					235					240	
Gln	Pro	Thr	Ala	Gly	Leu	Gln	Asp	Leu	His	Ile	His	Ser	Arg	Gln	
				245					250					255	
Glu	Glu	Glu	Gln	Ser	Glu	Ile	Met	Glu	Tyr	Ser	Val	Leu	Leu	Pro	
				260					265					270	
Arg	Thr	Leu	Phe	Gln	Arg	Thr	Lys	Gly	Arg	Ser	Gly	Glu	Ala	Glu	
				275					280					285	
Lys	Arg	Leu	Leu	Leu	Val	Asp	Phe	Ser	Ser	Gln	Ala	Leu	Phe	Gln	
				290					295					300	
Asp	Lys	Asn	Ser	Ser	Gln	Val	Leu	Gly	Glu	Lys	Val	Leu	Gly	Ile	
				305					310					315	
Val	Val	Gln	Asn	Thr	Lys	Val	Ala	Asn	Leu	Thr	Glu	Pro	Val	Val	
				320					325					330	
Leu	Thr	Phe	Gln	His	Gln	Leu	Gln	Pro	Lys	Asn	Val	Thr	Leu	Gln	
				335					340					345	
Cys	Val	Phe	Trp	Val	Glu	Asp	Pro	Thr	Leu	Ser	Ser	Pro	Gly	His	
				350					355					360	
Trp	Ser	Ser	Ala	Gly	Cys	Glu	Thr	Val	Arg	Arg	Glu	Thr	Gln	Thr	

365	370	375
Ser Cys Phe Cys Asn His Leu Thr Tyr	Phe Ala Val Leu Met Val	
380	385	390
Ser Ser Val Glu Val Asp Ala Val His	Lys His Tyr Leu Ser Leu	
395	400	405
Leu Ser Tyr Val Gly Cys Val Val Ser	Ala Leu Ala Cys Leu Val	
410	415	420
Thr Ile Ala Ala Tyr Leu Cys Ser Arg	Val Pro Leu Pro Cys Arg	
425	430	435
Arg Lys Pro Arg Asp Tyr Thr Ile Lys	Val His Met Asn Leu Leu	
440	445	450
Leu Ala Val Phe Leu Leu Asp Thr Ser	Phe Leu Leu Ser Glu Pro	
455	460	465
Val Ala Leu Thr Gly Ser Glu Ala Gly	Cys Arg Ala Ser Ala Ile	
470	475	480
Phe Leu His Phe Ser Leu Leu Thr Cys	Leu Ser Trp Met Gly Leu	
485	490	495
Glu Gly Tyr Asn Leu Tyr Arg Leu Val	Val Glu Val Phe Gly Thr	
500	505	510
Tyr Val Pro Gly Tyr Leu Leu Lys Leu	Ser Ala Met Gly Trp Gly	
515	520	525
Phe Pro Ile Phe Leu Val Thr Leu Val	Ala Leu Val Asp Val Asp	
530	535	540
Asn Tyr Gly Pro Ile Ile Leu Ala Val	His Arg Thr Pro Glu Gly	
545	550	555
Val Ile Tyr Pro Ser Met Cys Trp Ile	Arg Asp Ser Leu Val Ser	
560	565	570
Tyr Ile Thr Asn Leu Gly Leu Phe Ser	Leu Val Phe Leu Phe Asn	
575	580	585
Met Ala Met Leu Ala Thr Met Val Val	Gln Ile Leu Arg Leu Arg	
590	595	600
Pro His Thr Gln Lys Trp Ser His Val	Leu Thr Leu Leu Gly Leu	
605	610	615
Ser Leu Val Leu Gly Leu Pro Trp Ala	Leu Ile Phe Phe Ser Phe	
620	625	630
Ala Ser Gly Thr Phe Gln Leu Val Val	Leu Tyr Leu Phe Ser Ile	
635	640	645
Ile Thr Ser Phe Gln Gly Phe Leu Ile	Phe Ile Trp Tyr Trp Ser	
650	655	660

Met Arg Leu Gln Ala Arg Gly Gly Pro Ser Pro Leu Lys Ser Asn  
665 670 675

Ser Asp Ser Ala Arg Leu Pro Ile Ser Ser Gly Ser Thr Ser Ser  
680 685 690

Ser Arg Ile

<210> 484  
<211> 516  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 68, 70, 84, 147  
<223> unknown base

<400> 484  
tgcttgccct gccttgctcaa caatgccgct tactctgctt ccaggttgcc 50  
ctgccttgca gaggaanncn tcgggactac accntcaagt gcacatgaac 100  
ctgctgctgg ccgtcttctt gctggacacg agcttctctg tcagcgnagc 150  
cggtggccct gacaggctct gaaggctggc tgccgagcca gtgccatctt 200  
cctgcacttc tctgtctcac ctgcctttcc tggatggggc tcgaggggta 250  
caacctctac cgactcgtgg tggaggtctt tggcacctat gtccctggct 300  
acctactcaa gctgagcgcc atgggctggg gcttcccat ctttctggtg 350  
acgctggtgg ccctggtgga tgtggacaac tatggcccca tcatcttggc 400  
tgtgcatagg actccagagg ggcctcatcta cccttccatg tgctggatcc 450  
gggactccct ggtcagctac atcaccaacc tgggcctctt cagcctggtg 500  
tttctgttca acatgg 516

<210> 485  
<211> 22  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 485  
ggcattggag cagtgtctggg tg 22

<210> 486  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 486  
tggaggccta gatgcggctg gacg 24

<210> 487  
<211> 2849  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2715  
<223> unknown base

<400> 487  
cggaacgcgtg ggccggacgcg tgggcccgcg cgtggggcga cgcgtgggct 50  
ggttcaggctc cagggttttgc tttgatcctt ttcaaaaact ggagacacag 100  
aagaggggctc taggaaaaag ttttgatggg gattatgtgg aaactaccct 150  
gcgattctct gctgccagag caggctcggc gcttccaccc cagtgcagcc 200  
ttcccctggc ggtggtgaaa gagactcggg agtcgctgct tccaaagtgc 250  
ccgccgtgag tgagctctca cccagtcag ccaaagtgc ctcttcgggc 300  
ttctctctgt gacatctgcc ctggccggcc agagacaggg gactcaggcg 350  
gaatocaacc tgagtagtaa attccagttt tccagcaaca aggaacagaa 400  
cggagtacaa gatcctcagc atgagagaat tattactgtg tctactaatg 450  
gaagtattca cagcccaagg tttcctcata cttatccaag aaatacggtc 500  
ttggtatgga gattagtagc agtagaggaa aatgtatgga tacaacttac 550  
gtttgatgaa agatttgggc ttgaagacc cagaagatgac atatgcaagt 600  
atgattttgt agaagttgag gaaccagtg atggaactat attagggcgc 650  
tggtgtgggt ctggtactgt accaggaaaa cagatttcta aaggaaatca 700  
aattaggata agatttgtat ctgatgaata ttttccttct gaaccagggt 750  
tctgcatcca ctacaacatt gtcatgccac aattcacaga agctgtgagt 800  
ccttcagtgc taccctcttc agctttgcc ctggacctgc ttaataatgc 850  
tataactgcc tttagtagct tggaagacct tattcgatat cttgaaccag 900  
agagatggca gttggactta gaagatctat ataggccaac ttggcaactt 950  
cttggcaagg cttttgtttt tggaagaaaa tccagagtgg tggatctgaa 1000  
ccttctaaca gaggaggtaa gattatacag ctgcacacct cgtaacttct 1050

cagtggtccat aaggggaagaa ctaaagagaa cggataccat tttctggcca 1100  
ggttggtctcc tgggttaaacy ctgtgggtggg aactgtgcct gttgtctcca 1150  
caattgcaat gaatgtcaat gtgtcccaag caaagttact aaaaaatacc 1200  
acgaggtcct tcagttgaga ccaaagaccg gtgtcagggg attgcacaaa 1250  
tcactcaccg acgtggccct ggagcaccat gaggagtgtg actgtgtgtg 1300  
cagagggagc acaggaggat agccgcacat ccaccagcag ctcttgccca 1350  
gagctgtgca gtgcagtggc tgattctatt agagaacgta tgcgttatct 1400  
ccatccttaa tctcagttgt ttgcttcaag gacctttcat cttcaggatt 1450  
tacagtgcac tctgaaagag gagacatcaa acagaattag gagttgtgca 1500  
acagctcttt tgagaggagg cctaaaggac aggagaaaag gtcttcaatc 1550  
gtggaaagaa aattaaatgt tgtattaaat agatcaccag ctagtttcag 1600  
agttaccatg tacgtattcc actagctggg ttctgtatct cagttctttc 1650  
gatacggctt agggtaatgt cagtacagga aaaaaactgt gcaagtgagc 1700  
acctgattcc gttgccttgc ttaactctaa agctccatgt cctgggccta 1750  
aaatcgtata aaatctggat tttttttttt ttttttgctc atattcacat 1800  
atgtaaacca gaacattcta tgtactacaa acctgggttt taaaaaggaa 1850  
ctatgttgct atgaattaaa cttgtgtcat gctgatagga cagactggat 1900  
ttttcatatt tcttattaaa atttctgcca tttagaagaa gagaactaca 1950  
ttcatgggtt ggaagagata aacctgaaaa gaagagtggc cttatcttca 2000  
ctttatcgat aagtcagttt atttgtttca ttgtgtacat ttttatattc 2050  
tccttttgac attataactg ttggcttttc taatcttggt aaatatatct 2100  
atttttacca aaggtattta atattctttt ttatgacaac ttagatcaac 2150  
tatttttagc ttggtaaatt tttctaaaca caattgttat agccagagga 2200  
acaaagatga tataaaatat tgttgctctg acaaaaatac atgtatttca 2250  
ttctcgtatg gtgctagagt tagattaatc tgcattttta aaaactgaat 2300  
tggaatagaa ttggtaaagt gcaaagactt tttgaaaata attaaattat 2350  
catatcttcc attoctgtta ttggagatga aaataaaaag caacttatga 2400  
aagtagacat tcagatccag ccattactaa cctattcctt ttttggggaa 2450  
atctgagcct agctcagaaa aacataaagc accttgaaaa agacttggca 2500



gcttcctgat aaagcgtgct gtgctgtgca gtaggaacac atcctattta 2550  
 ttgtgatgtt gtggttttat tatcttaaac tctgttccat acacttgat 2600  
 aaatacatgg atatttttat gtacagaagt atgtctctta accagttcac 2650  
 ttattgtact ctggcaattt aaaagaaaat cagtaaaata ttttgcttgt 2700  
 aaaatgctta atatngtgcc taggttatgt ggtgactatt tgaatcaaaa 2750  
 atgtattgaa tcatcaata aaagaatgtg gctatttttg ggagaaaatt 2800  
 aaaaaaaaaa aaaaaaaaaa aggtttaggg ataacagggt aatgcggcc 2849

<210> 488

<211> 345

<212> PRT

<213> Homo sapiens

<400> 488

Met	Ser	Leu	Phe	Gly	Leu	Leu	Leu	Leu	Thr	Ser	Ala	Leu	Ala	Gly	1	5	10	15
Gln	Arg	Gln	Gly	Thr	Gln	Ala	Glu	Ser	Asn	Leu	Ser	Ser	Lys	Phe	20	25	30	
Gln	Phe	Ser	Ser	Asn	Lys	Glu	Gln	Asn	Gly	Val	Gln	Asp	Pro	Gln	35	40	45	
His	Glu	Arg	Ile	Ile	Thr	Val	Ser	Thr	Asn	Gly	Ser	Ile	His	Ser	50	55	60	
Pro	Arg	Phe	Pro	His	Thr	Tyr	Pro	Arg	Asn	Thr	Val	Leu	Val	Trp	65	70	75	
Arg	Leu	Val	Ala	Val	Glu	Glu	Asn	Val	Trp	Ile	Gln	Leu	Thr	Phe	80	85	90	
Asp	Glu	Arg	Phe	Gly	Leu	Glu	Asp	Pro	Glu	Asp	Asp	Ile	Cys	Lys	95	100	105	
Tyr	Asp	Phe	Val	Glu	Val	Glu	Glu	Pro	Ser	Asp	Gly	Thr	Ile	Leu	110	115	120	
Gly	Arg	Trp	Cys	Gly	Ser	Gly	Thr	Val	Pro	Gly	Lys	Gln	Ile	Ser	125	130	135	
Lys	Gly	Asn	Gln	Ile	Arg	Ile	Arg	Phe	Val	Ser	Asp	Glu	Tyr	Phe	140	145	150	
Pro	Ser	Glu	Pro	Gly	Phe	Cys	Ile	His	Tyr	Asn	Ile	Val	Met	Pro	155	160	165	
Gln	Phe	Thr	Glu	Ala	Val	Ser	Pro	Ser	Val	Leu	Pro	Pro	Ser	Ala	170	175	180	
Leu	Pro	Leu	Asp	Leu	Leu	Asn	Asn	Ala	Ile	Thr	Ala	Phe	Ser	Thr	185	190	195	

Leu	Glu	Asp	Leu	Ile	Arg	Tyr	Leu	Glu	Pro	Glu	Arg	Trp	Gln	Leu	200	205	210
Asp	Leu	Glu	Asp	Leu	Tyr	Arg	Pro	Thr	Trp	Gln	Leu	Leu	Gly	Lys	215	220	225
Ala	Phe	Val	Phe	Gly	Arg	Lys	Ser	Arg	Val	Val	Asp	Leu	Asn	Leu	230	235	240
Leu	Thr	Glu	Glu	Val	Arg	Leu	Tyr	Ser	Cys	Thr	Pro	Arg	Asn	Phe	245	250	255
Ser	Val	Ser	Ile	Arg	Glu	Glu	Leu	Lys	Arg	Thr	Asp	Thr	Ile	Phe	260	265	270
Trp	Pro	Gly	Cys	Leu	Leu	Val	Lys	Arg	Cys	Gly	Gly	Asn	Cys	Ala	275	280	285
Cys	Cys	Leu	His	Asn	Cys	Asn	Glu	Cys	Gln	Cys	Val	Pro	Ser	Lys	290	295	300
Val	Thr	Lys	Lys	Tyr	His	Glu	Val	Leu	Gln	Leu	Arg	Pro	Lys	Thr	305	310	315
Gly	Val	Arg	Gly	Leu	His	Lys	Ser	Leu	Thr	Asp	Val	Ala	Leu	Glu	320	325	330
His	His	Glu	Glu	Cys	Asp	Cys	Val	Cys	Arg	Gly	Ser	Thr	Gly	Gly	335	340	345

<210> 489

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 489

acttctcagt gtccataagg g 21

<210> 490

<211> 40

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 490

gaactaaaga gaaccgatac cattttctgg ccaggttgtc 40

<210> 491

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 491

caccacagcg ttttaaccagg 20

<210> 492

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 492

acaacaggca cagttcccac 20

<210> 493

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 493

ggcggaatcc aacctgagta g 21

<210> 494

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 494

gcggctatcc tcctgtgctc 20

<210> 495

<211> 3283

<212> DNA

<213> Homo sapiens

<400> 495

cccatctcaa gctgatcttg gcacctctca tgctctgctc tcttcaacca 50

gacctctaca ttccatcttg gaagaagact aaaaatgggtg tttccaatgt 100

ggacactgaa gagacaaatt cttatccttt ttaacataat cctaatttcc 150

aaactccttg gggctagatg gtttcctaaa actctgccct gtgatgtcac 200

tctggatgtt ccaaagaacc atgtgatcgt ggactgcaca gacaagcatt 250

tgacagaaat tcctggaggt attcccaoga acaccacgaa cctcaccttc 300

accattaacc acataaccaga catctcccca gcgtcctttc acagactgga 350

ccatctggta gagatcgatt tcagatgcaa ctgtgtacct attccactgg 400  
ggtcaaaaaa caacatgtgc atcaagaggc tgcagattaa acccagaagc 450  
tttagtggac tcacttattt aaaatccctt tacctggatg gaaaccagct 500  
actagagata ccgcagggcc tcccgcctag cttacagctt ctcagccttg 550  
aggccaacaa catcttttcc atcagaaaag agaataaac agaactggcc 600  
aacatagaaa tactctacct gggccaaaac tggtattatc gaaatccttg 650  
ttatgtttca tattcaatag agaaagatgc cttcctaaac ttgacaaagt 700  
taaaagtgct ctccctgaaa gataacaatg tcacagccgt ccctactgtt 750  
ttgccatcta ctttaacaga actatatctc tacaacaaca tgattgcaaa 800  
aatccaagaa gatgatttta ataacctcaa ccaattacaa attcttgacc 850  
taagtggaaa ttgccctcgt tggtataatg ccccatcttc ttgtgcgccg 900  
tgtaaaaata attctccctt acagatccct gttaaagctt ttgatgcgct 950  
gacagaatta aaagttttac gtctacacag taactctctt cagcatgtgc 1000  
ccccaagatg gtttaagaac atcaacaaac tccaggaact ggatctgtcc 1050  
caaaacttct tggccaaaaga aattggggat gctaaatttc tgcattttct 1100  
ccccagctc atccaattgg atctgtcttt caattttgaa cttcaggtct 1150  
atcgtgcac tatgaatcta tcacaagcat tttcttcaact gaaaagcctg 1200  
aaaattctgc ggatcagagg atatgtcttt aaagagttga aaagctttaa 1250  
cctctcgcca ttacataatc ttcaaaatct tgaagttctt gatcttggca 1300  
ctaactttat aaaaattgct aacctcagca tgttttaaca atttaaaaga 1350  
ctgaaagtca tagatctttc agtgaataaa atatcacctt caggagattc 1400  
aagtgaagtt ggcttctgct caaatgccag aacttctgta gaaagttatg 1450  
aaccacaggt cctggaacaa ttacattatt tcagatatga taagtatgca 1500  
aggagtggca gattcaaaaa caaagaggct tctttcatgt ctgttaatga 1550  
aagctgctac aagtatgggc agaccttgga tctaagtaaa aatagtatat 1600  
ttttgtcaa gtcctctgat tttcagcatc tttctttcct caaatgcctg 1650  
aatctgtcag gaaatctcat tagccaaact cttaatggca gtgaattcca 1700  
acctttagca gagctgagat atttggaact ctccaacaac cggcttgatt 1750  
tactccattc aacagcatct gaagagcttc acaaactgga agttctggat 1800

ataagcagta atagccatta ttttcaatca gaaggaatta ctcatatgct 1850  
 aaactttacc aagaacctaa aggttctgca gaaactgatg atgaacgaca 1900  
 atgacatctc ttctccacc agcaggacca tggagagtga gtctcttaga 1950  
 actctggaat tcagaggaaa tcacttagat gttttatgga gagaaggtga 2000  
 taacagatac ttacaattat tcaagaatct gctaaaatta gaggaattag 2050  
 acatctctaa aaattcccta agtttcttgc cttctggagt ttttgatggg 2100  
 atgcctccaa atctaaagaa tctctctttg gccaaaaatg ggctcaaadc 2150  
 tttcagttgg aagaaactcc agtgtctaaa gaacctggaa actttggacc 2200  
 tcagccacaa ccaactgacc actgtccctg agagattatc caactgttcc 2250  
 agaagcctca agaattctgat tcttaagaat aatcaaatca ggagtctgac 2300  
 gaagtatttt ctacaagatg ccttccagtt gcgatatctg gatctcagct 2350  
 caaataaaat ccagatgatc caaaagacca gcttcccaga aaatgtcctc 2400  
 aacaatctga agatgttgc tttgcatcat aatcggtttc tgtgcacctg 2450  
 tgatgctgtg tggtttgtct ggtgggttaa ccatacgag gtgactattc 2500  
 cttacctggc cacagatgtg acttgtgtgg gccaggagc acacaagggc 2550  
 caaagtgtga tctccctgga tctgtacacc tgtgagttag atctgactaa 2600  
 cctgattctg ttctcaactt ccatatctgt atctctctt ctcatggtga 2650  
 tgatgacagc aagtcacctc tatttctggg atgtgtggta tattaccat 2700  
 ttctgtaagg ccaagataaa ggggtatcag cgtctaatat caccagactg 2750  
 ttgctatgat gcttttattg tgtatgacac taaagacca gctgtgaccg 2800  
 agtgggtttt ggctgagctg gtggccaaac tggaagacc aagagagaaa 2850  
 cattttaatt tatgtctcga ggaaaggac tggttaccag ggcagccagt 2900  
 tctggaaaac ctttcccaga gcatacagct tagcaaaaag acagtgtttg 2950  
 tgatgacaga caagtatgca aagactgaaa attttaagat agcattttac 3000  
 ttgtcccatc agaggctcat ggatgaaaaa gttgatgtga ttatcttgat 3050  
 atttcttgag aagccctttc agaagtccaa gttctccag ctccggaaaa 3100  
 ggctctgtgg gagttctgtc cttgagtggc caacaaacc gcaagctcac 3150  
 ccatacttct ggcagtgtct aaagaacgcc ctggccacag acaatcatgt 3200  
 ggcctatagt caggtgttca aggaaacggg ctagcccttc tttgcaaac 3250

acaactgcct agtttaccaa ggagagcct ggc 3283

<210> 496

<211> 1049

<212> PRT

<213> Homo sapiens

<400> 496

Met	Val	Phe	Pro	Met	Trp	Thr	Leu	Lys	Arg	Gln	Ile	Leu	Ile	Leu	
1				5				10						15	
Phe	Asn	Ile	Ile	Leu	Ile	Ser	Lys	Leu	Leu	Gly	Ala	Arg	Trp	Phe	
				20				25						30	
Pro	Lys	Thr	Leu	Pro	Cys	Asp	Val	Thr	Leu	Asp	Val	Pro	Lys	Asn	
				35				40						45	
His	Val	Ile	Val	Asp	Cys	Thr	Asp	Lys	His	Leu	Thr	Glu	Ile	Pro	
				50				55						60	
Gly	Gly	Ile	Pro	Thr	Asn	Thr	Thr	Asn	Leu	Thr	Leu	Thr	Ile	Asn	
				65				70						75	
His	Ile	Pro	Asp	Ile	Ser	Pro	Ala	Ser	Phe	His	Arg	Leu	Asp	His	
				80				85						90	
Leu	Val	Glu	Ile	Asp	Phe	Arg	Cys	Asn	Cys	Val	Pro	Ile	Pro	Leu	
				95				100						105	
Gly	Ser	Lys	Asn	Asn	Met	Cys	Ile	Lys	Arg	Leu	Gln	Ile	Lys	Pro	
				110				115						120	
Arg	Ser	Phe	Ser	Gly	Leu	Thr	Tyr	Leu	Lys	Ser	Leu	Tyr	Leu	Asp	
				125				130						135	
Gly	Asn	Gln	Leu	Leu	Glu	Ile	Pro	Gln	Gly	Leu	Pro	Pro	Ser	Leu	
				140				145						150	
Gln	Leu	Leu	Ser	Leu	Glu	Ala	Asn	Asn	Ile	Phe	Ser	Ile	Arg	Lys	
				155				160						165	
Glu	Asn	Leu	Thr	Glu	Leu	Ala	Asn	Ile	Glu	Ile	Leu	Tyr	Leu	Gly	
				170				175						180	
Gln	Asn	Cys	Tyr	Tyr	Arg	Asn	Pro	Cys	Tyr	Val	Ser	Tyr	Ser	Ile	
				185				190						195	
Glu	Lys	Asp	Ala	Phe	Leu	Asn	Leu	Thr	Lys	Leu	Lys	Val	Leu	Ser	
				200				205						210	
Leu	Lys	Asp	Asn	Asn	Val	Thr	Ala	Val	Pro	Thr	Val	Leu	Pro	Ser	
				215				220						225	
Thr	Leu	Thr	Glu	Leu	Tyr	Leu	Tyr	Asn	Asn	Met	Ile	Ala	Lys	Ile	
				230				235						240	
Gln	Glu	Asp	Asp	Phe	Asn	Asn	Leu	Asn	Gln	Leu	Gln	Ile	Leu	Asp	
				245				250						255	

Leu	Ser	Gly	Asn	Cys	Pro	Arg	Cys	Tyr	Asn	Ala	Pro	Phe	Pro	Cys	
				260					265					270	
Ala	Pro	Cys	Lys	Asn	Asn	Ser	Pro	Leu	Gln	Ile	Pro	Val	Asn	Ala	
				275					280					285	
Phe	Asp	Ala	Leu	Thr	Glu	Leu	Lys	Val	Leu	Arg	Leu	His	Ser	Asn	
				290					295					300	
Ser	Leu	Gln	His	Val	Pro	Pro	Arg	Trp	Phe	Lys	Asn	Ile	Asn	Lys	
				305					310					315	
Leu	Gln	Glu	Leu	Asp	Leu	Ser	Gln	Asn	Phe	Leu	Ala	Lys	Glu	Ile	
				320					325					330	
Gly	Asp	Ala	Lys	Phe	Leu	His	Phe	Leu	Pro	Ser	Leu	Ile	Gln	Leu	
				335					340					345	
Asp	Leu	Ser	Phe	Asn	Phe	Glu	Leu	Gln	Val	Tyr	Arg	Ala	Ser	Met	
				350					355					360	
Asn	Leu	Ser	Gln	Ala	Phe	Ser	Ser	Leu	Lys	Ser	Leu	Lys	Ile	Leu	
				365					370					375	
Arg	Ile	Arg	Gly	Tyr	Val	Phe	Lys	Glu	Leu	Lys	Ser	Phe	Asn	Leu	
				380					385					390	
Ser	Pro	Leu	His	Asn	Leu	Gln	Asn	Leu	Glu	Val	Leu	Asp	Leu	Gly	
				395					400					405	
Thr	Asn	Phe	Ile	Lys	Ile	Ala	Asn	Leu	Ser	Met	Phe	Lys	Gln	Phe	
				410					415					420	
Lys	Arg	Leu	Lys	Val	Ile	Asp	Leu	Ser	Val	Asn	Lys	Ile	Ser	Pro	
				425					430					435	
Ser	Gly	Asp	Ser	Ser	Glu	Val	Gly	Phe	Cys	Ser	Asn	Ala	Arg	Thr	
				440					445					450	
Ser	Val	Glu	Ser	Tyr	Glu	Pro	Gln	Val	Leu	Glu	Gln	Leu	His	Tyr	
				455					460					465	
Phe	Arg	Tyr	Asp	Lys	Tyr	Ala	Arg	Ser	Cys	Arg	Phe	Lys	Asn	Lys	
				470					475					480	
Glu	Ala	Ser	Phe	Met	Ser	Val	Asn	Glu	Ser	Cys	Tyr	Lys	Tyr	Gly	
				485					490					495	
Gln	Thr	Leu	Asp	Leu	Ser	Lys	Asn	Ser	Ile	Phe	Phe	Val	Lys	Ser	
				500					505					510	
Ser	Asp	Phe	Gln	His	Leu	Ser	Phe	Leu	Lys	Cys	Leu	Asn	Leu	Ser	
				515					520					525	
Gly	Asn	Leu	Ile	Ser	Gln	Thr	Leu	Asn	Gly	Ser	Glu	Phe	Gln	Pro	
				530					535					540	
Leu	Ala	Glu	Leu	Arg	Tyr	Leu	Asp	Phe	Ser	Asn	Asn	Arg	Leu	Asp	

545	550	555
Leu Leu His Ser Thr Ala Phe Glu Glu	Leu His Lys Leu Glu Val	
560	565	570
Leu Asp Ile Ser Ser Asn Ser His Tyr	Phe Gln Ser Glu Gly Ile	
575	580	585
Thr His Met Leu Asn Phe Thr Lys Asn	Leu Lys Val Leu Gln Lys	
590	595	600
Leu Met Met Asn Asp Asn Asp Ile Ser	Ser Ser Thr Ser Arg Thr	
605	610	615
Met Glu Ser Glu Ser Leu Arg Thr Leu	Glu Phe Arg Gly Asn His	
620	625	630
Leu Asp Val Leu Trp Arg Glu Gly Asp	Asn Arg Tyr Leu Gln Leu	
635	640	645
Phe Lys Asn Leu Leu Lys Leu Glu Glu	Leu Asp Ile Ser Lys Asn	
650	655	660
Ser Leu Ser Phe Leu Pro Ser Gly Val	Phe Asp Gly Met Pro Pro	
665	670	675
Asn Leu Lys Asn Leu Ser Leu Ala Lys	Asn Gly Leu Lys Ser Phe	
680	685	690
Ser Trp Lys Lys Leu Gln Cys Leu Lys	Asn Leu Glu Thr Leu Asp	
695	700	705
Leu Ser His Asn Gln Leu Thr Thr Val	Pro Glu Arg Leu Ser Asn	
710	715	720
Cys Ser Arg Ser Leu Lys Asn Leu Ile	Leu Lys Asn Asn Gln Ile	
725	730	735
Arg Ser Leu Thr Lys Tyr Phe Leu Gln	Asp Ala Phe Gln Leu Arg	
740	745	750
Tyr Leu Asp Leu Ser Ser Asn Lys Ile	Gln Met Ile Gln Lys Thr	
755	760	765
Ser Phe Pro Glu Asn Val Leu Asn Asn	Leu Lys Met Leu Leu Leu	
770	775	780
His His Asn Arg Phe Leu Cys Thr Cys	Asp Ala Val Trp Phe Val	
785	790	795
Trp Trp Val Asn His Thr Glu Val Thr	Ile Pro Tyr Leu Ala Thr	
800	805	810
Asp Val Thr Cys Val Gly Pro Gly Ala	His Lys Gly Gln Ser Val	
815	820	825
Ile Ser Leu Asp Leu Tyr Thr Cys Glu	Leu Asp Leu Thr Asn Leu	
830	835	840



Ile	Leu	Phe	Ser	Leu	Ser	Ile	Ser	Val	Ser	Leu	Phe	Leu	Met	Val	
				845						850				855	
Met	Met	Thr	Ala	Ser	His	Leu	Tyr	Phe	Trp	Asp	Val	Trp	Tyr	Ile	
				860						865				870	
Tyr	His	Phe	Cys	Lys	Ala	Lys	Ile	Lys	Gly	Tyr	Gln	Arg	Leu	Ile	
				875						880				885	
Ser	Pro	Asp	Cys	Cys	Tyr	Asp	Ala	Phe	Ile	Val	Tyr	Asp	Thr	Lys	
				890						895				900	
Asp	Pro	Ala	Val	Thr	Glu	Trp	Val	Leu	Ala	Glu	Leu	Val	Ala	Lys	
				905						910				915	
Leu	Glu	Asp	Pro	Arg	Glu	Lys	His	Phe	Asn	Leu	Cys	Leu	Glu	Glu	
				920						925				930	
Arg	Asp	Trp	Leu	Pro	Gly	Gln	Pro	Val	Leu	Glu	Asn	Leu	Ser	Gln	
				935						940				945	
Ser	Ile	Gln	Leu	Ser	Lys	Lys	Thr	Val	Phe	Val	Met	Thr	Asp	Lys	
				950						955				960	
Tyr	Ala	Lys	Thr	Glu	Asn	Phe	Lys	Ile	Ala	Phe	Tyr	Leu	Ser	His	
				965						970				975	
Gln	Arg	Leu	Met	Asp	Glu	Lys	Val	Asp	Val	Ile	Ile	Leu	Ile	Phe	
				980						985				990	
Leu	Glu	Lys	Pro	Phe	Gln	Lys	Ser	Lys	Phe	Leu	Gln	Leu	Arg	Lys	
				995						1000				1005	
Arg	Leu	Cys	Gly	Ser	Ser	Val	Leu	Glu	Trp	Pro	Thr	Asn	Pro	Gln	
				1010						1015				1020	
Ala	His	Pro	Tyr	Phe	Trp	Gln	Cys	Leu	Lys	Asn	Ala	Leu	Ala	Thr	
				1025						1030				1035	
Asp	Asn	His	Val	Ala	Tyr	Ser	Gln	Val	Phe	Lys	Glu	Thr	Val		
				1040						1045					

<210> 497

<211> 4199

<212> DNA

<213> Homo sapiens

<400> 497

```

gggtaccatt ctgcgctgct gcaagttacg gaatgaaaaa ttagaacaac 50
agaaacatgg aaaacatggt ccttcagtcg tcaatgctga cctgcatttt 100
cctgctaata tctgggttcct gtgagttatg cgccgaagaa aatttttcta 150
gaagctatcc ttgtgatgag aaaaagcaaa atgactcagt tattgcagag 200
tgcagcaatc gtcgactaca ggaagttccc caaacggtgg gcaaatatgt 250

```

gacagaacta gacctgtctg ataatttcat cacacacata acgaatgaat 300  
catttcaagg gctgcaaaat ctactataaa taaatctaaa ccacaacccc 350  
aatgtacagc accagaacgg aaatccoggt atacaatcaa atggcttgaa 400  
tatcacagac ggggcattcc tcaacctaaa aaacctaaagg gagttactgc 450  
ttgaagacaa ccagttaccc caaataccct ctggtttgcc agagtctttg 500  
acagaactta gtotaattca aaacaatata tacaacataa ctaaagaggg 550  
catttcaaga cttataaact tgaaaaatct ctatttggcc tggaactgct 600  
attttaacaa agtttgcgag aaaactaaca tagaagatgg agtatttgaa 650  
acgctgacaa atttggagtt gctatcacta tctttcaatt ctctttcaca 700  
cgtgccaccc aaactgccaa gctccctacg caaacttttt ctgagcaaca 750  
cccagatcaa atacattagt gaagaagatt tcaagggatt gataaattta 800  
acattactag atttaagcgg gaactgtccg aggtgcttca atgccccatt 850  
tccatgcgtg ccttgtgatg gtggtgcttc aattaatata gatcgttttg 900  
cttttcaaaa cttgacccaa cttcgatacc taaacctctc tagcacttcc 950  
ctcaggaaga ttaatgctgc ctggtttaaa aatatgcctc atctgaaggt 1000  
gctggatctt gaattcaact atttagtggg agaaatagtc tctggggcat 1050  
ttttaacgat gctgccccgc ttagaaatac ttgacttgctc ttttaactat 1100  
ataaagggga gttatccaca gcatattaat atttccagaa acttctctaa 1150  
acttttgtct ctacgggcat tgcatttaag aggttatgtg ttccaggaac 1200  
tcagagaaga tgatttccag ccctgatgc agcttccaaa cttatcgact 1250  
atcaacttgg gtattaattt tattaagcaa atcgatttca aacttttcca 1300  
aaatttctcc aatctggaaa ttatttactt gtcagaaaac agaatatcac 1350  
cgttggtaaa agataccogg cagagttatg caaatagttc ctcttttcaa 1400  
cgtcatatcc ggaaacgacg ctcaacagat tttgagtttg acccacattc 1450  
gaacttttat catttcaccc gtcctttaat aaagccacaa tgtgctgctt 1500  
atggaaaagc cttagattta agcctcaaca gtattttctt cattgggcca 1550  
aaccaatttg aaaatcttcc tgacattgcc tgtttaaatc tgtctgcaaa 1600  
tagcaatgct caagtgttaa gtggaactga attttcagcc attcctcatg 1650  
tcaaatattt ggatttgaca aacaatagac tagactttga taatgctagt 1700

gctcttactg aattgtccga cttggaagtt ctagatctca gctataattc 1750  
acactatttc agaatagcag gcgtaacaca tcatctagaa tttattcaaa 1800  
atttcacaaa tctaaaagtt ttaaacttga gccacaacaa catttatact 1850  
ttaacagata agtataacct ggaaagcaag tccctggtag aattagtttt 1900  
cagtggcaat cgccttgaca ttttgtggaa tgatgatgac aacaggtata 1950  
tctccatttt caaaggcttc aagaatctga cacgtctgga tttatccctt 2000  
aataggctga agcacatccc aaatgaagca ttccttaatt tgccagcgag 2050  
tctcactgaa ctacatataa atgataatat gttaaagttt ttttaactgga 2100  
cattactoca gcagtttcct cgtctcgagt tgcttgactt acgtggaaac 2150  
aaactactct ttttaactga tagcctatct gactttacat cttcccttcg 2200  
gacactgctg ctgagtcata acaggatttc ccacctaccc tctggctttc 2250  
tttctgaagt cagtagtctg aagcacctcg atttaagttc caatctgcta 2300  
aaaacaatca acaaatccgc acttgaaact aagaccacca ccaaattatc 2350  
tatgttgga ctaacacgga acccctttga atgcacctgt gacattggag 2400  
atttccgaag atggatggat gaacatctga atgtcaaaat tcccagactg 2450  
gtagatgtca tttgtgccag tcttggggat caaagaggga agagtattgt 2500  
gagtctggag ctaacaactt gtgtttcaga tgtcactgca gtgatattat 2550  
ttttcttcac gttctttatc accaccatgg ttatgttggc tgccctggct 2600  
caccatttgt tttactggga tggttggttt atatataatg tgtgttttagc 2650  
taaggtaaaa ggctacaggt ctctttccac atcccaaact ttctatgatg 2700  
cttacatttc ttatgacacc aaagatgcct ctgttactga ctgggtgata 2750  
aatgagctgc gctaccacct tgaagagagc cgagacaaaa acgttctcct 2800  
ttgtctagag gagagggatt gggaccggg attggccatc atcgacaacc 2850  
tcatgcagag catcaaccaa agcaagaaaa cagtatttgt ttttaaccaa 2900  
aaatatgcaa aaagctggaa ctttaaaaca gctttttact tggctttgca 2950  
gaggctaata gatgagaaca tggatgtgat tatatttatc ctgctggagc 3000  
cagtgttaca gcattctcag tatttgaggc tacggcagcg gatctgtaag 3050  
agctccatcc tccagtggcc tgacaaccg aaggcagaag gcttgttttg 3100  
gcaaactctg agaaatgtgg tcttgactga aaatgattca cgtataaca 3150

atatgtatgt cgattccatt aagcaatact aactgacgtt aagtcattgat 3200  
 ttcgcgccat aataaagatg caaaggaatg acatttctgt attagttatc 3250  
 tattgctatg taacaaatta tcccaaaact tagtggttta aaacaacaca 3300  
 tttgctggcc cacagttttt gagggtcagg agtccaggcc cagcataact 3350  
 gggtcctctg ctcagggtgt ctcagaggct gcaatgtagg tgttcaccag 3400  
 agacataggc atcactgggg tcacactcat gtggttggtt tctggattca 3450  
 attcctcctg ggctattggc caaaggctat actcatgtaa gccatgagag 3500  
 cctctccac aaggcagctt gttcatcag agctagcaaa aaagagaggt 3550  
 tgctagcaag atgaagtcac aatcttttgt aatcgaatca aaaaagtgat 3600  
 atctcatcac ttggccata ttctatttgt tagaagtaaa ccacagggtcc 3650  
 caccagctcc atgggagtga ccacctcagt ccagggaataa cagctgaaga 3700  
 ccaagatggg gagctctgat tgcttcagtt ggtcatcaac tattttccct 3750  
 tgactgctgt cctgggatgg cctgctatct tgatgataga ttgtgaatat 3800  
 caggaggcag ggatcactgt ggacctcctt agcagttgac ctaacacatc 3850  
 ttcttttcaa tatctaagaa cttttgccac tgtgactaat ggtcctaata 3900  
 ttaagctggt gtttatattt atcatatata tatggctaca tggttatatt 3950  
 atgctgtggt tgcgttcggt tttatttaca gttgctttta caaatatttg 4000  
 ctgtaacatt tgacttctaa ggttttagatg ccatttaaga actgagatgg 4050  
 atagctttta aagcatcttt tactttcttac cattttttta aagtatgcag 4100  
 ctaaattcga agcttttggt ctatattggt aattgccatt gctgtaaatc 4150  
 ttaaaatgaa tgaataaaaa tgtttcattt tacaaaaaaa aaaaaaaaaa 4199

<210> 498

<211> 1041

<212> PRT

<213> Homo sapiens

<400> 498

Met	Glu	Asn	Met	Phe	Leu	Gln	Ser	Ser	Met	Leu	Thr	Cys	Ile	Phe
1				5					10					15

Leu	Leu	Ile	Ser	Gly	Ser	Cys	Glu	Leu	Cys	Ala	Glu	Glu	Asn	Phe
				20					25					30

Ser	Arg	Ser	Tyr	Pro	Cys	Asp	Glu	Lys	Lys	Gln	Asn	Asp	Ser	Val
				35					40					45

Ile	Ala	Glu	Cys	Ser	Asn	Arg	Arg	Leu	Gln	Glu	Val	Pro	Gln	Thr
-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----	-----

50					55					60				
Val	Gly	Lys	Tyr	Val	Thr	Glu	Leu	Asp	Leu	Ser	Asp	Asn	Phe	Ile
				65					70					75
Thr	His	Ile	Thr	Asn	Glu	Ser	Phe	Gln	Gly	Leu	Gln	Asn	Leu	Thr
				80					85					90
Lys	Ile	Asn	Leu	Asn	His	Asn	Pro	Asn	Val	Gln	His	Gln	Asn	Gly
				95					100					105
Asn	Pro	Gly	Ile	Gln	Ser	Asn	Gly	Leu	Asn	Ile	Thr	Asp	Gly	Ala
				110					115					120
Phe	Leu	Asn	Leu	Lys	Asn	Leu	Arg	Glu	Leu	Leu	Leu	Glu	Asp	Asn
				125					130					135
Gln	Leu	Pro	Gln	Ile	Pro	Ser	Gly	Leu	Pro	Glu	Ser	Leu	Thr	Glu
				140					145					150
Leu	Ser	Leu	Ile	Gln	Asn	Asn	Ile	Tyr	Asn	Ile	Thr	Lys	Glu	Gly
				155					160					165
Ile	Ser	Arg	Leu	Ile	Asn	Leu	Lys	Asn	Leu	Tyr	Leu	Ala	Trp	Asn
				170					175					180
Cys	Tyr	Phe	Asn	Lys	Val	Cys	Glu	Lys	Thr	Asn	Ile	Glu	Asp	Gly
				185					190					195
Val	Phe	Glu	Thr	Leu	Thr	Asn	Leu	Glu	Leu	Leu	Ser	Leu	Ser	Phe
				200					205					210
Asn	Ser	Leu	Ser	His	Val	Pro	Pro	Lys	Leu	Pro	Ser	Ser	Leu	Arg
				215					220					225
Lys	Leu	Phe	Leu	Ser	Asn	Thr	Gln	Ile	Lys	Tyr	Ile	Ser	Glu	Glu
				230					235					240
Asp	Phe	Lys	Gly	Leu	Ile	Asn	Leu	Thr	Leu	Leu	Asp	Leu	Ser	Gly
				245					250					255
Asn	Cys	Pro	Arg	Cys	Phe	Asn	Ala	Pro	Phe	Pro	Cys	Val	Pro	Cys
				260					265					270
Asp	Gly	Gly	Ala	Ser	Ile	Asn	Ile	Asp	Arg	Phe	Ala	Phe	Gln	Asn
				275					280					285
Leu	Thr	Gln	Leu	Arg	Tyr	Leu	Asn	Leu	Ser	Ser	Thr	Ser	Leu	Arg
				290					295					300
Lys	Ile	Asn	Ala	Ala	Trp	Phe	Lys	Asn	Met	Pro	His	Leu	Lys	Val
				305					310					315
Leu	Asp	Leu	Glu	Phe	Asn	Tyr	Leu	Val	Gly	Glu	Ile	Val	Ser	Gly
				320					325					330
Ala	Phe	Leu	Thr	Met	Leu	Pro	Arg	Leu	Glu	Ile	Leu	Asp	Leu	Ser
				335					340					345

Phe Asn Tyr Ile	Lys Gly Ser Tyr Pro	Gln His Ile Asn Ile	Ser
350	355	360	
Arg Asn Phe Ser	Lys Leu Leu Ser Leu	Arg Ala Leu His Leu	Arg
365	370	375	
Gly Tyr Val Phe	Gln Glu Leu Arg Glu	Asp Asp Phe Gln Pro	Leu
380	385	390	
Met Gln Leu Pro	Asn Leu Ser Thr Ile	Asn Leu Gly Ile Asn	Phe
395	400	405	
Ile Lys Gln Ile	Asp Phe Lys Leu Phe	Gln Asn Phe Ser Asn	Leu
410	415	420	
Glu Ile Ile Tyr	Leu Ser Glu Asn Arg	Ile Ser Pro Leu Val	Lys
425	430	435	
Asp Thr Arg Gln	Ser Tyr Ala Asn Ser	Ser Ser Phe Gln Arg	His
440	445	450	
Ile Arg Lys Arg	Arg Ser Thr Asp Phe	Glu Phe Asp Pro His	Ser
455	460	465	
Asn Phe Tyr His	Phe Thr Arg Pro Leu	Ile Lys Pro Gln Cys	Ala
470	475	480	
Ala Tyr Gly Lys	Ala Leu Asp Leu Ser	Leu Asn Ser Ile Phe	Phe
485	490	495	
Ile Gly Pro Asn	Gln Phe Glu Asn Leu	Pro Asp Ile Ala Cys	Leu
500	505	510	
Asn Leu Ser Ala	Asn Ser Asn Ala Gln	Val Leu Ser Gly Thr	Glu
515	520	525	
Phe Ser Ala Ile	Pro His Val Lys Tyr	Leu Asp Leu Thr Asn	Asn
530	535	540	
Arg Leu Asp Phe	Asp Asn Ala Ser Ala	Leu Thr Glu Leu Ser	Asp
545	550	555	
Leu Glu Val Leu	Asp Leu Ser Tyr Asn	Ser His Tyr Phe Arg	Ile
560	565	570	
Ala Gly Val Thr	His His Leu Glu Phe	Ile Gln Asn Phe Thr	Asn
575	580	585	
Leu Lys Val Leu	Asn Leu Ser His Asn	Asn Ile Tyr Thr Leu	Thr
590	595	600	
Asp Lys Tyr Asn	Leu Glu Ser Lys Ser	Leu Val Glu Leu Val	Phe
605	610	615	
Ser Gly Asn Arg	Leu Asp Ile Leu Trp	Asn Asp Asp Asp Asn	Arg
620	625	630	
Tyr Ile Ser Ile	Phe Lys Gly Leu Lys	Asn Leu Thr Arg Leu	Asp

635	640	645
Leu Ser Leu Asn Arg Leu Lys His Ile	Pro Asn Glu Ala Phe	Leu
650	655	660
Asn Leu Pro Ala Ser Leu Thr Glu Leu	His Ile Asn Asp Asn	Met
665	670	675
Leu Lys Phe Phe Asn Trp Thr Leu Leu	Gln Gln Phe Pro Arg	Leu
680	685	690
Glu Leu Leu Asp Leu Arg Gly Asn Lys	Leu Leu Phe Leu Thr	Asp
695	700	705
Ser Leu Ser Asp Phe Thr Ser Ser Leu	Arg Thr Leu Leu Leu	Ser
710	715	720
His Asn Arg Ile Ser His Leu Pro Ser	Gly Phe Leu Ser Glu	Val
725	730	735
Ser Ser Leu Lys His Leu Asp Leu Ser	Ser Asn Leu Leu Lys	Thr
740	745	750
Ile Asn Lys Ser Ala Leu Glu Thr Lys	Thr Thr Thr Lys Leu	Ser
755	760	765
Met Leu Glu Leu His Gly Asn Pro Phe	Glu Cys Thr Cys Asp	Ile
770	775	780
Gly Asp Phe Arg Arg Trp Met Asp Glu	His Leu Asn Val Lys	Ile
785	790	795
Pro Arg Leu Val Asp Val Ile Cys Ala	Ser Pro Gly Asp Gln	Arg
800	805	810
Gly Lys Ser Ile Val Ser Leu Glu Leu	Thr Thr Cys Val Ser	Asp
815	820	825
Val Thr Ala Val Ile Leu Phe Phe Phe	Thr Phe Phe Ile Thr	Thr
830	835	840
Met Val Met Leu Ala Ala Leu Ala His	His Leu Phe Tyr Trp	Asp
845	850	855
Val Trp Phe Ile Tyr Asn Val Cys Leu	Ala Lys Val Lys Gly	Tyr
860	865	870
Arg Ser Leu Ser Thr Ser Gln Thr Phe	Tyr Asp Ala Tyr Ile	Ser
875	880	885
Tyr Asp Thr Lys Asp Ala Ser Val Thr	Asp Trp Val Ile Asn	Glu
890	895	900
Leu Arg Tyr His Leu Glu Glu Ser Arg	Asp Lys Asn Val Leu	Leu
905	910	915
Cys Leu Glu Glu Arg Asp Trp Asp Pro	Gly Leu Ala Ile Ile	Asp
920	925	930

Asn	Leu	Met	Gln	Ser	Ile	Asn	Gln	Ser	Lys	Lys	Thr	Val	Phe	Val		
															935	945
Leu	Thr	Lys	Lys	Tyr	Ala	Lys	Ser	Trp	Asn	Phe	Lys	Thr	Ala	Phe		
															950	960
Tyr	Leu	Ala	Leu	Gln	Arg	Leu	Met	Asp	Glu	Asn	Met	Asp	Val	Ile		
															965	975
Ile	Phe	Ile	Leu	Leu	Glu	Pro	Val	Leu	Gln	His	Ser	Gln	Tyr	Leu		
															980	990
Arg	Leu	Arg	Gln	Arg	Ile	Cys	Lys	Ser	Ser	Ile	Leu	Gln	Trp	Pro		
															995	1005
Asp	Asn	Pro	Lys	Ala	Glu	Gly	Leu	Phe	Trp	Gln	Thr	Leu	Arg	Asn		
															1010	1020
Val	Val	Leu	Thr	Glu	Asn	Asp	Ser	Arg	Tyr	Asn	Asn	Met	Tyr	Val		
															1025	1035
Asp	Ser	Ile	Lys	Gln	Tyr											
															1040	

<210> 499  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 499  
 taaagaccca gctgtgaccg 20

<210> 500  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 500  
 atccatgagc ctctgatggg 20

<210> 501  
 <211> 45  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 501  
 atttatgtct cgaggaaagg gactggttac cagggcagcc agttc 45

<210> 502



<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 502  
gccgagacaa aaacgttctc c 21

<210> 503  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 503  
catccatgtt ctcattccatt agcc 24

<210> 504  
<211> 46  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 504  
tcgacaacct catgcagagc atcaacacaa gcaagaaaac agtatt 46

<210> 505  
<211> 1738  
<212> DNA  
<213> Homo sapiens

<400> 505  
ccagggtccaa ctgcacctcg gttctatcga ttgaattccc cggggatcct 50  
ctagagatcc ctgcacctcg acccacgcgt ccgccaagct ggccctgcac 100  
ggctgcaagg gaggctcctg tggacaggcc aggcagggtg gcctcaggag 150  
gtgcctccag gcggccagtg ggcctgaggc cccagcaagg gctaggggtcc 200  
atctccagtc ccaggacaca gcagcggcca ccatggccac gcctgggctc 250  
cagcagcatc agcagccccc aggaccggg aggcacaggt ggccccacc 300  
acccggagga gcagctcctg ccctgtccg ggggatgact gattctcctc 350  
cgccaggcca cccagaggag aaggccaccc cgcttgagg cacaggccat 400  
gaggggctct caggagggtg tgctgatgtg gcttctggtg ttggcagtgg 450  
gcggcacaga gcacgcctac cgggccggcc gtaggggtgtg tgctgtccgg 500

gctcacgggg accctgtctc cgagtcgttc gtgcagcgtg tgtaccagcc 550  
cttcctcacc acctgcgacg ggccaccggc ctgcagcacc taccgaacca 600  
tctataggac cgcctaccgc cgcagccctg ggctggcccc tgccaggcct 650  
cgctacgcgt gctgccccgg ctggaagagg accagcgggc ttcttggggc 700  
ctgtggagca gcaatatgcc agccgccatg ccggaacgga gggagctgtg 750  
tccagcctgg ccgctgccgc tgccctgcag gatggcgggg tgacacttgc 800  
cagtcagatg tggatgaatg cagtgcctag aggggcggct gtccccagcg 850  
ctgcatcaac accgccggca gttactggtg ccagtgttgg gaggggcaca 900  
gcctgtctgc agacggtaca ctctgtgtgc ccaaggagg gccccccagg 950  
gtggccccca acccgacagg agtggacagt gcaatgaagg aagaagtgc 1000  
gaggctgcag tccagggtgg acctgctgga ggagaagctg cagctggtgc 1050  
tggccccact gcacagcctg gcctgcgagg cactggagca tgggctccc 1100  
gaccccgga gctcctggt gcactccttc cagcagctcg gccgcatcga 1150  
ctccctgagc gagcagattt ccttcctgga ggagcagctg gggctcctgt 1200  
cctgcaagaa agactcgtga ctgcccagcg ccccaggctg gactgagccc 1250  
ctcacgccgc cctgcagccc ccattgcccct gcccaacatg ctgggggtcc 1300  
agaagccacc tcggggtgac tgagcgggaag gccaggcagg gccttcctcc 1350  
tcttctcct ccccttcctc gggaggctcc ccagaccctg gcatgggatg 1400  
ggctgggatc ttctctgtga atccaccctt ggctaccccc accctggcta 1450  
ccccaacggc atcccaaggc cagggtgggc ctcagctgag ggaaggtagc 1500  
agctccctgc tggagcctgg gacccatggc acaggccagg cagcccggag 1550  
gctgggtggg gcctcagtgg gggctgctgc ctgaccccca gcacaataaa 1600  
aatgaaacgt gaaaaaaaa aaaaaaaaa aaaaaaaaa aaaaaaaaa 1650  
aaagggcggc cgcgactcta gagtcgacct gcagaagctt ggccgccatg 1700  
gccaacttg ttattgcag cttataatgg ttacaaat 1738

<210> 506

<211> 273

<212> PRT

<213> Homo sapiens

<400> 506

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu
1					5				10					15

Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	20	25	30
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	35	40	45
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	50	55	60
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	65	70	75
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	80	85	90
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	95	100	105
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	110	115	120
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	125	130	135
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	140	145	150
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	155	160	165
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	170	175	180
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	185	190	195
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	200	205	210
Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala	215	220	225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu	230	235	240
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu	245	250	255
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys	260	265	270

Lys Asp Ser

<210> 507  
 <211> 1700  
 <212> DNA  
 <213> Homo sapiens

<400> 507

gccaggcagg tgggcctcag gaggtgcctc caggcggcca gtgggcctga 50  
ggccccagca agggctaggg tccatctcca gtcccaggac acagcagcgg 100  
ccaccatggc cagcctggg ctccagcagc atcagagcag cccctgtggt 150  
tggcagcaaa gttcagcttg gctgggcccg ctgtgagggg cttcgcgcta 200  
cgccctgcgg tgtcccgagg gctgaggtct cctcatcttc tccctagcag 250  
tggtatgagca acccaacggg ggcccgggga ggggaactgg ccccgaggga 300  
gaggaacccc aaagccacat ctgtagccag gatgagcagt gtgaatccag 350  
gcagccccca ggaccgggga ggcacagggtg gccccacca cccggaggag 400  
cagctcctgc cctgtccgg gggatgactg attctcctcc gccaggccac 450  
ccagaggaga aggccacccc gcctggaggc acaggccatg aggggctctc 500  
aggagggtgt gctgatgtgg cttctggtgt tggcagtggg cggcacagag 550  
cacgcctacc ggcccggccg tagggtgtgt gctgtccggg ctacagggga 600  
ccctgtctcc gagtcgttcg tgcagcgtgt gtaccagccc ttcctacca 650  
cctgcgacgg gcaccgggccc tgcagcacct accgaaccat ctataggacc 700  
gcctaccgcc gcagccctgg gctggcccct gccaggcctc gctacgcgtg 750  
ctgccccggc tggaagagga ccagcgggct tccctggggcc tgtggagcag 800  
caatatgcca gccgccatgc cggaacggag ggagctgtgt ccagcctggc 850  
cgctgccgt gcccctgcagg atggcgggggt gacacttgcc agtcagatgt 900  
ggatgaatgc agtgctagga ggggcggctg tcccagcgc tgcataaca 950  
ccgcccgcag ttactggtgc cagtgttggg aggggcacag cctgtctgca 1000  
gacggtacac tctgtgtgcc caaggagggg cccccaggg tggccccaa 1050  
cccagacagga gtggacagt caatgaagga agaagtgcag aggctgcagt 1100  
ccagggtgga cctgctggag gagaagctgc agctggtgct ggccccactg 1150  
cacagcctgg cctgcaggc actggagcat gggctcccgg accccggcag 1200  
cctcctggtg cactccttcc agcagctcgg ccgcatcgac tccctgagcg 1250  
agcagatttc cttcctggag gagcagctgg ggtcctgctc ctgcaagaaa 1300  
gactcgtgac tgcccagcgc tccaggctgg actgagcccc tcacgccgcc 1350  
ctgcagcccc catgcccctg cccaacatgc tgggggtcca gaagccacct 1400  
cggggtgact gagcggaagg ccaggcaggg ccttcctcct cttcctcctc 1450

cccttcctcg ggaggtcccc cagaccctgg catgggatgg gctgggatct 1500  
 tctctgtgaa tccacccctg gctaccccca cctgggtac cccaacggca 1550  
 tcccaaggcc aggtggaccc tcagctgagg gaaggtacga gctccctgct 1600  
 ggagcctggg acccatggca caggccaggc agcccggagg ctgggtgggg 1650  
 cctcagtggg ggctgctgcc tgacccccag cacaataaaa atgaaacgtg 1700

<210> 508

<211> 273

<212> PRT

<213> Homo sapiens

<400> 508

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu	1	5	10	15
Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	20	25	30	
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	35	40	45	
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	50	55	60	
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	65	70	75	
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	80	85	90	
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	95	100	105	
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	110	115	120	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	125	130	135	
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln	140	145	150	
Arg	Cys	Ile	Asn	Thr	Ala	Gly	Ser	Tyr	Trp	Cys	Gln	Cys	Trp	Glu	155	160	165	
Gly	His	Ser	Leu	Ser	Ala	Asp	Gly	Thr	Leu	Cys	Val	Pro	Lys	Gly	170	175	180	
Gly	Pro	Pro	Arg	Val	Ala	Pro	Asn	Pro	Thr	Gly	Val	Asp	Ser	Ala	185	190	195	
Met	Lys	Glu	Glu	Val	Gln	Arg	Leu	Gln	Ser	Arg	Val	Asp	Leu	Leu	200	205	210	

Glu	Glu	Lys	Leu	Gln	Leu	Val	Leu	Ala	Pro	Leu	His	Ser	Leu	Ala
				215					220					225
Ser	Gln	Ala	Leu	Glu	His	Gly	Leu	Pro	Asp	Pro	Gly	Ser	Leu	Leu
				230					235					240
Val	His	Ser	Phe	Gln	Gln	Leu	Gly	Arg	Ile	Asp	Ser	Leu	Ser	Glu
				245					250					255
Gln	Ile	Ser	Phe	Leu	Glu	Glu	Gln	Leu	Gly	Ser	Cys	Ser	Cys	Lys
				260					265					270

Lys Asp Ser

<210> 509  
 <211> 1538  
 <212> DNA  
 <213> Homo sapiens

<400> 509  
 cccacgcgtc cgaagctggc cctgcacggc tgcaagggag gtcctgtgg 50  
 acaggccagg caggtgggccc tcaggaggtg cctccaggcg gccagtgggc 100  
 ctgaggcccc agcaagggct agggctccatc tccagtccca ggacacagca 150  
 gcggccacca tggccacgcc tgggctccag cagcatcagc agcccccagg 200  
 accggggagg cacaggtggc cccaccacc cggaggagca gtcctgccc 250  
 ctgtccgggg gatgactgat tctcctccgc caggccacc agaggagaag 300  
 gccacccgc ctggaggcac aggccatgag gggctctcag gagtgctgc 350  
 tgatgtggct tctggtgttg gcagtgggcg gcacagagca cgcctaccgg 400  
 cccggccgta ggggtgtgtg tgtccgggt cacggggacc ctgtctccga 450  
 gtcgttcgtg cagcgtgtgt accagccctt cctcaccacc tgcgacgggc 500  
 accgggcctg cagcacctac cgaaccatct ataggaccgc ctaccgccgc 550  
 agccctgggc tggcccctgc caggcctcgc tacgcgtgct gcccggctg 600  
 gaagaggacc agcgggcttc ctggggcctg tggagcagca atatgccagc 650  
 cgccatgccg gaacggaggg agctgtgtcc agcctggccg ctgccgctgc 700  
 cctgcaggat ggcgggggtga cacttgccag tcagatgtgg atgaatgcag 750  
 tgctaggagg ggcggctgtc cccagcgtg cgtcaacacc gccggcagtt 800  
 actggtgcca gtgttgggag gggcacagcc tgtctgcaga cggtacactc 850  
 tgtgtgcccc agggagggcc cccaggggtg gcccacaacc cgacaggagt 900  
 ggacagtgca atgaaggaag aagtgcagag gctgcagtcc aggttgacc 950

tgctggagga gaagctgcag ctggtgctgg cccactgca cagcctggcc 1000  
 tcgcaggcac tggagcatgg gctcccgac cccggcagcc tcctggtgca 1050  
 ctccctccag cagctcggcc gcacgactc cctgagcgag cagatttcct 1100  
 tcctggagga gcagctgggg tcctgctcct gcaagaaaga ctctgactg 1150  
 cccagcggcc caggctggac tgagcccctc acgcccctt gcagccccc 1200  
 tgcccctgcc caacatgctg ggggtccaga agccacctcg gggtgactga 1250  
 gcggaaggcc aggcagggcc ttctctctct tctctctccc ctctctcggg 1300  
 aggctcccca gaccctggca tgggatgggc tgggatcttc tctgtgaatc 1350  
 caccctggc taccctccacc ctggctaccc caacggcatc ccaaggccag 1400  
 gtgggcccctc agctgagggg aggtacgagc tccctgctgg agcctgggac 1450  
 ccatggcaca ggccaggcag cccggaggct ggggtggggcc tcagtggggg 1500  
 ctgctgcctg acccccagca caataaaaat gaaacgtg 1538

<210> 510

<211> 273

<212> PRT

<213> Homo sapiens

<400> 510

Met	Arg	Gly	Ser	Gln	Glu	Val	Leu	Leu	Met	Trp	Leu	Leu	Val	Leu	1	5	10	15
Ala	Val	Gly	Gly	Thr	Glu	His	Ala	Tyr	Arg	Pro	Gly	Arg	Arg	Val	20	25	30	
Cys	Ala	Val	Arg	Ala	His	Gly	Asp	Pro	Val	Ser	Glu	Ser	Phe	Val	35	40	45	
Gln	Arg	Val	Tyr	Gln	Pro	Phe	Leu	Thr	Thr	Cys	Asp	Gly	His	Arg	50	55	60	
Ala	Cys	Ser	Thr	Tyr	Arg	Thr	Ile	Tyr	Arg	Thr	Ala	Tyr	Arg	Arg	65	70	75	
Ser	Pro	Gly	Leu	Ala	Pro	Ala	Arg	Pro	Arg	Tyr	Ala	Cys	Cys	Pro	80	85	90	
Gly	Trp	Lys	Arg	Thr	Ser	Gly	Leu	Pro	Gly	Ala	Cys	Gly	Ala	Ala	95	100	105	
Ile	Cys	Gln	Pro	Pro	Cys	Arg	Asn	Gly	Gly	Ser	Cys	Val	Gln	Pro	110	115	120	
Gly	Arg	Cys	Arg	Cys	Pro	Ala	Gly	Trp	Arg	Gly	Asp	Thr	Cys	Gln	125	130	135	
Ser	Asp	Val	Asp	Glu	Cys	Ser	Ala	Arg	Arg	Gly	Gly	Cys	Pro	Gln				

	140	145	150
Arg Cys Val Asn Thr Ala Gly Ser Tyr Trp Cys Gln Cys Trp Glu	155	160	165
Gly His Ser Leu Ser Ala Asp Gly Thr Leu Cys Val Pro Lys Gly	170	175	180
Gly Pro Pro Arg Val Ala Pro Asn Pro Thr Gly Val Asp Ser Ala	185	190	195
Met Lys Glu Glu Val Gln Arg Leu Gln Ser Arg Val Asp Leu Leu	200	205	210
Glu Glu Lys Leu Gln Leu Val Leu Ala Pro Leu His Ser Leu Ala	215	220	225
Ser Gln Ala Leu Glu His Gly Leu Pro Asp Pro Gly Ser Leu Leu	230	235	240
Val His Ser Phe Gln Gln Leu Gly Arg Ile Asp Ser Leu Ser Glu	245	250	255
Gln Ile Ser Phe Leu Glu Glu Gln Leu Gly Ser Cys Ser Cys Lys	260	265	270

Lys Asp Ser

<210> 511

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 511

tggagcagca atatgccagc c 21

<210> 512

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 512

ttttccactc ctgtcggggtt gg 22

<210> 513

<211> 46

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe



<400> 513  
ggtgacactt gccagtcaga tgtggatgaa tgcagtgcta ggaggg 46

<210> 514  
<211> 2690  
<212> DNA  
<213> Homo sapiens

<220>  
<221> unsure  
<222> 2039-2065  
<223> unknown base

<400> 514  
ggttgccaca gctggttttag ggccccgacc actggggccc cttgtcagga 50  
ggagacagcc tcccggccccg gggaggacaa gtcgctgcc cttttggctg 100  
ccgacgtgat tccctgggac ggtccgtttc ctgccgtcag ctgccggccg 150  
agttgggtct cctgttttca ggccggctcc cccttcctgg tctcccttct 200  
cccgtgggc cggtttatcg ggaggagatt gtcttcagg gctagcaatt 250  
ggacttttga tgatgtttga ccagcggca ggaatagcag gcaacgtgat 300  
ttcaaagctg ggctcagcct ctgtttcttc tctcgtgtaa tcgcaaaacc 350  
cattttggag caggaattcc aatcatgtct gtgatgggtg tgagaaagaa 400  
ggtgacacgg aaatgggaga aactcccagg caggaacacc ttttgctgtg 450  
atggccgogt catgatggcc cggcaaaagg gcattttcta cctgaccctt 500  
ttcctcatcc tggggacatg tacactcttc ttgcctttg agtgccgcta 550  
cctggctggt cagctgtctc ctgccatccc tgtatttgct gccatgctct 600  
tccttttctc catggctaca ctgttgagga ccagcttcag tgaccctgga 650  
gtgattcctc gggcgctacc agatgaagca gctttcatag aaatggagat 700  
agaagctacc aatggtgctg tgccccagg ccagcgacca ccgcctcgta 750  
tcaagaattt ccagataaac aaccagattg tgaaactgaa atactgttac 800  
acatgcaaga tcttcgggcc tcccgggcc tccattgca gcatctgtga 850  
caactgtgtg gagcgcttcg accatcactg cccctgggtg ggggaattgtg 900  
ttggaaagag gaactaccgc tacttctacc tcttcacctt ttctctctcc 950  
ctcctcacia tctatgtctt cgccttcaac atcgtctatg tggccctcaa 1000  
atctttgaaa attggcttct tggagacatt gaaagaaact cctggaactg 1050  
ttctagaagt cctcatttgc ttctttacac tctggtccgt cgtgggactg 1100

actggatttc atactttcct cgtggctctc aaccagacaa ccaatgaaga 1150  
 catcaaagga tcatggacag ggaagaatcg cgtccagaat ccctacagcc 1200  
 atggcaatat tgtgaagaac tgctgtgaag tgctgtgtgg ccccttgccc 1250  
 cccagtgtgc tggatcgaag gggatatttg ccaactggagg aaagtggaag 1300  
 tcgacctccc agtactcaag agaccagtag cagcctcttg ccacagagcc 1350  
 cagccccac agaacacctg aactcaaagt agatgccgga ggacagcagc 1400  
 actcccgaag agatgccacc tccagagccc ccagagccac cacaggaggc 1450  
 agctgaagct gagaagtagc ctatctatgg aagagacttt tgtttgtgtt 1500  
 taattagggc tatgagagat ttcaggtgag aagttaaacc tgagacagag 1550  
 agcaagtaag ctgtcccttt taactgtttt tctttggtct ttagtcaccc 1600  
 agttgcacac tggcattttc ttgctgcaag cttttttaaa tttctgaact 1650  
 caaggcagtg gcagaagatg tcagtcacct ctgataactg gaaaaatggg 1700  
 tctcttgggc cctggcactg gttctccatg gcctcagcca cagggtcccc 1750  
 ttggaccccc tctcttcctt ccagatccca gccctcctgc ttggggtcac 1800  
 tgggtctcatt ctggggctaa aagtttttga gactggctca aatcctccca 1850  
 agctgctgca cgtgctgagt ccagaggcag tcacagagac ctctggccag 1900  
 gggatcctaa ctgggttctt ggggtottca ggactgaaga ggaggagag 1950  
 tggggtcaga agattctcct ggccaccaag tgccagcatt gccacaaat 2000  
 ccttttagga atgggacagg taccttcac ttgttgtann nnnnnnnnn 2050  
 nnnnnnnnnn nnnnnttgtt tttccttttg actcctgctc ccattaggag 2100  
 caggaatggc agtaataaaa gtctgcactt tggtcatttc tttcctcag 2150  
 aggaagcccc agtgctcact taaacactat cccctcagac tccctgtgtg 2200  
 aggctgcag aggccctgaa tgcacaaatg ggaaaccaag gcacagagag 2250  
 gctctcctct cctctcctct ccccgatgt accctcaaaa aaaaaaaaaat 2300  
 gctaaccagt tcttccattt agcctcggct gagtgaggga aagcccagca 2350  
 ctgctgccct ctogggtaac tcaccctaag gcctcggccc acctctggct 2400  
 atggtaacca cactgggggc ttctccaag ccccgctctt ccagcacttc 2450  
 caccggcaga gtcccagagc cacttcaccc tgggggtggg ctgtggcccc 2500  
 cagtcagctc tgctcaggac ctgctctatt tcagggaaga agatttatgt 2550

attatatgtg gctatatatttc ctagagcacc tgtgttttcc tctttctaag 2600  
ccagggtcct gtctggatga cttatgcggg gggggagtgt aaaccggaac 2650  
ttttcatcta tttgaaggcg attaaactgt gtctaatagca 2690

<210> 515

<211> 364

<212> PRT

<213> Homo sapiens

<400> 515

Met Ser Val Met Val Val Arg Lys Lys Val Thr Arg Lys Trp Glu  
1 5 10 15

Lys Leu Pro Gly Arg Asn Thr Phe Cys Cys Asp Gly Arg Val Met  
20 25 30

Met Ala Arg Gln Lys Gly Ile Phe Tyr Leu Thr Leu Phe Leu Ile  
35 40 45

Leu Gly Thr Cys Thr Leu Phe Phe Ala Phe Glu Cys Arg Tyr Leu  
50 55 60

Ala Val Gln Leu Ser Pro Ala Ile Pro Val Phe Ala Ala Met Leu  
65 70 75

Phe Leu Phe Ser Met Ala Thr Leu Leu Arg Thr Ser Phe Ser Asp  
80 85 90

Pro Gly Val Ile Pro Arg Ala Leu Pro Asp Glu Ala Ala Phe Ile  
95 100 105

Glu Met Glu Ile Glu Ala Thr Asn Gly Ala Val Pro Gln Gly Gln  
110 115 120

Arg Pro Pro Pro Arg Ile Lys Asn Phe Gln Ile Asn Asn Gln Ile  
125 130 135

Val Lys Leu Lys Tyr Cys Tyr Thr Cys Lys Ile Phe Arg Pro Pro  
140 145 150

Arg Ala Ser His Cys Ser Ile Cys Asp Asn Cys Val Glu Arg Phe  
155 160 165

Asp His His Cys Pro Trp Val Gly Asn Cys Val Gly Lys Arg Asn  
170 175 180

Tyr Arg Tyr Phe Tyr Leu Phe Ile Leu Ser Leu Ser Leu Leu Thr  
185 190 195

Ile Tyr Val Phe Ala Phe Asn Ile Val Tyr Val Ala Leu Lys Ser  
200 205 210

Leu Lys Ile Gly Phe Leu Glu Thr Leu Lys Glu Thr Pro Gly Thr  
215 220 225

Val Leu Glu Val Leu Ile Cys Phe Phe Thr Leu Trp Ser Val Val

230	235	240
Gly Leu Thr Gly Phe His Thr Phe Leu Val Ala Leu Asn Gln Thr		
245	250	255
Thr Asn Glu Asp Ile Lys Gly Ser Trp Thr Gly Lys Asn Arg Val		
260	265	270
Gln Asn Pro Tyr Ser His Gly Asn Ile Val Lys Asn Cys Cys Glu		
275	280	285
Val Leu Cys Gly Pro Leu Pro Pro Ser Val Leu Asp Arg Arg Gly		
290	295	300
Ile Leu Pro Leu Glu Glu Ser Gly Ser Arg Pro Pro Ser Thr Gln		
305	310	315
Glu Thr Ser Ser Ser Leu Leu Pro Gln Ser Pro Ala Pro Thr Glu		
320	325	330
His Leu Asn Ser Asn Glu Met Pro Glu Asp Ser Ser Thr Pro Glu		
335	340	345
Glu Met Pro Pro Pro Glu Pro Pro Glu Pro Pro Gln Glu Ala Ala		
350	355	360
Glu Ala Glu Lys		

<210> 516  
 <211> 255  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 36, 38, 88, 118, 135, 193, 213, 222  
 <223> unknown base

<400> 516  
 aaaaccctgt atttttttaca atgcaaatag acaatnancc tggaggtctt 50  
 tgaattaggt attatagggga tgggtgggggtt gatttttntt cctggaggct 100  
 tttggctttg gactctcnct ttctcccaca gagcncttcg accatcactg 150  
 cccctgggtg ggggaattgtg ttggaaagag gaactaccgc tanttctacc 200  
 tottcatcct ttntctctcc cncctcacia tctatgtctt cgccttcaac 250  
 atcgt 255

<210> 517  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 517

caacgtgatt tcaaagctgg gctc 24

<210> 518

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 518

gcctcgtatc aagaatttcc 20

<210> 519

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 519

agtgggaagtc gacctccc 18

<210> 520

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 520

ctcacctgaa atctctcata gccc 24

<210> 521

<211> 50

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 521

cgcaaaaccc attttgggag caggaattcc aatcatgtct gtgatggtgg 50

<210> 522

<211> 1679

<212> DNA

<213> Homo sapiens

<400> 522

gttgtgtcct tcagcaaac agtggattta aatctccttg cacaagcttg 50

agagcaacac aatctatcag gaaagaaaga aagaaaaaaa ccgaacctga 100

caaaaaagaa gaaaaaagaag aagaaaaaaa atcatgaaaa ccatccagcc 150  
aaaaatgcac aattctatct cttgggcaat cttcacgggg ctggctgctc 200  
tgtgtctctt ccaaggagtg cccgtgcgca gcggagatgc caccttcccc 250  
aaagctatgg acaacgtgac ggtccggcag ggggagagcg ccaccctcag 300  
gtgcactatt gacaaccggg tcacccgggt gccctggcta aaccgcagca 350  
ccatcctcta tgctgggaat gacaagtggg gccctggatcc tcgcgtggtc 400  
cttctgagca acacccaaac gcagtacagc atcgagatcc agaacgtgga 450  
tgtgtatgac gagggccctt acacctgctc ggtgcagaca gacaaccacc 500  
caaagacctc taggggccac ctcatgtgc aagtatctcc caaaattgta 550  
gagatttctt cagatatctc cattaatgaa ggaacaata ttagcctcac 600  
ctgcatagca actggtagac cagagcctac gggtacttgg agacacatct 650  
ctcccaaagc gggtggcttt gtgagtgaag acgaatactt ggaaattcag 700  
ggcatcaccg gggagcagtc aggggactac gagtgcagtg cctccaatga 750  
cgtggccgcg cccgtggtac ggagagtaaa ggtcacctg aactatccac 800  
catacatttc agaagccaag ggtacaggtg tccccgtggg acaaaagggg 850  
aactgcagt gtgaagcctc agcagtcctc tcagcagaat tccagtggta 900  
caaggatgac aaaagactga ttgaaggaaa gaaaggggtg aaagtggaaa 950  
acagaccttt cctctcaaaa ctcatcttct tcaatgtctc tgaacatgac 1000  
tatgggaact acacttgctg gccctccaac aagctggggc acaccaatgc 1050  
cagcatcatg ctatttggtc caggcgccgt cagcgagggt agcaacggca 1100  
cgtcgaggag ggcaggctgc gtctggctgc tgcctcttct ggtcttgac 1150  
ctgcttctca aattttgatg tgagtgcac ttccccaccc gggaaaggct 1200  
gccgccacca ccaccacca cacaacagca atggcaacac cgacagcaac 1250  
caatcagata tatacaaatg aaattagaag aaacacagcc tcatgggaca 1300  
gaaatttgag ggaggggaac aaagaatact ttggggggaa aagagtttta 1350  
aaaaagaaat tgaaaattgc cttgcagata tttaggtaca atggagtttt 1400  
cttttccaa acgggaagaa cacagcacac cgggcttga cccactgcaa 1450  
gctgcatcgt gcaacctctt tggtgccagt gtgggcaagg gctcagcctc 1500  
tctgccaca gagtgcctcc acgtggaaca ttctggagct ggccatccca 1550

aattcaatca gtccatagag acgaacagaa tgagaccttc cggcccaagc 1600  
 gtggcgctgc gggcactttg gtagactgtg ccaccacggc gtgtgttg 1650  
 aaacgtgaaa taaaaagagc aaaaaaaaaa 1679

<210> 523  
 <211> 344  
 <212> PRT  
 <213> Homo sapiens

<400> 523  
 Met Lys Thr Ile Gln Pro Lys Met His Asn Ser Ile Ser Trp Ala  
 1 5 10 15  
 Ile Phe Thr Gly Leu Ala Ala Leu Cys Leu Phe Gln Gly Val Pro  
 20 25 30  
 Val Arg Ser Gly Asp Ala Thr Phe Pro Lys Ala Met Asp Asn Val  
 35 40 45  
 Thr Val Arg Gln Gly Glu Ser Ala Thr Leu Arg Cys Thr Ile Asp  
 50 55 60  
 Asn Arg Val Thr Arg Val Ala Trp Leu Asn Arg Ser Thr Ile Leu  
 65 70 75  
 Tyr Ala Gly Asn Asp Lys Trp Cys Leu Asp Pro Arg Val Val Leu  
 80 85 90  
 Leu Ser Asn Thr Gln Thr Gln Tyr Ser Ile Glu Ile Gln Asn Val  
 95 100 105  
 Asp Val Tyr Asp Glu Gly Pro Tyr Thr Cys Ser Val Gln Thr Asp  
 110 115 120  
 Asn His Pro Lys Thr Ser Arg Val His Leu Ile Val Gln Val Ser  
 125 130 135  
 Pro Lys Ile Val Glu Ile Ser Ser Asp Ile Ser Ile Asn Glu Gly  
 140 145 150  
 Asn Asn Ile Ser Leu Thr Cys Ile Ala Thr Gly Arg Pro Glu Pro  
 155 160 165  
 Thr Val Thr Trp Arg His Ile Ser Pro Lys Ala Val Gly Phe Val  
 170 175 180  
 Ser Glu Asp Glu Tyr Leu Glu Ile Gln Gly Ile Thr Arg Glu Gln  
 185 190 195  
 Ser Gly Asp Tyr Glu Cys Ser Ala Ser Asn Asp Val Ala Ala Pro  
 200 205 210  
 Val Val Arg Arg Val Lys Val Thr Val Asn Tyr Pro Pro Tyr Ile  
 215 220 225  
 Ser Glu Ala Lys Gly Thr Gly Val Pro Val Gly Gln Lys Gly Thr

230	235	240
Leu Gln Cys Glu Ala Ser Ala Val Pro	Ser Ala Glu Phe Gln Trp	
245	250	255
Tyr Lys Asp Asp Lys Arg Leu Ile Glu	Gly Lys Lys Gly Val Lys	
260	265	270
Val Glu Asn Arg Pro Phe Leu Ser Lys	Leu Ile Phe Phe Asn Val	
275	280	285
Ser Glu His Asp Tyr Gly Asn Tyr Thr	Cys Val Ala Ser Asn Lys	
290	295	300
Leu Gly His Thr Asn Ala Ser Ile Met	Leu Phe Gly Pro Gly Ala	
305	310	315
Val Ser Glu Val Ser Asn Gly Thr Ser	Arg Arg Ala Gly Cys Val	
320	325	330
Trp Leu Leu Pro Leu Leu Val Leu His	Leu Leu Leu Lys Phe	
335	340	

<210> 524  
 <211> 503  
 <212> DNA  
 <213> Homo sapiens

<400> 524  
 gaaaaaaaat catgaaaacc atccagccaa aaatgcacaa ttctatctct 50  
 tgggcaatct tcacggggct ggctgctctg tgtctcttcc aaggagtgcc 100  
 cgtgogcagc ggagatgcca ccttccccaag agctatggac aacgtgacgg 150  
 tccggcaggg ggagagcgcc accctcaggt gcactattga caaccgggtc 200  
 acccggtggtg cctggctaaa ccgcagcacc atcctctatg ctgggaatga 250  
 caagtgggtgc ctggatcctc gcgtggctct tctgagcaac acccaaacgc 300  
 agtacagcat cgagatccag aacgtggatg tgtatgacga gggcccttac 350  
 acctgctcgg tgcagacaga caaccaccca aagacctcta ggtccacct 400  
 cattgtgcaa gtatctccca aaattgtaga gatttcttca gatatctcca 450  
 ttaatgaagg gaacaatatt agcctcacct gcatagcaac tggtagacca 500  
 gag 503

<210> 525  
 <211> 2602  
 <212> DNA  
 <213> Homo sapiens

<400> 525  
 atggctggtg acggcggggc cgggcagggg accggggccg cggcccgga 50



gcggggccagc tgccggggagc cctgaatcac cgcctggccc gactccacca 100  
 tgaacgtcgc gctgcaggag ctgggagctg gcagcaacgt gggattccag 150  
 aaggggacaa gacagctgtt aggctcacgc acgcagctgg agctgggtctt 200  
 agcaggtgcc tctctactgc tggctgcact gcttctgggc tgccttgtgg 250  
 ccctaggggt ccagtaccac agagacccat cccacagcac ctgccttaca 300  
 gaggcctgca ttcgagtggc tggaaaaatc ctggagtccc tggaccgagg 350  
 ggtgagcccc tgtgaggact tttaccagtt ctctgtggg ggctggattc 400  
 ggaggaaccc cctgcccgat gggcgttctc gctggaacac cttcaacagc 450  
 ctctgggacc aaaaccaggc catactgaag cacctgcttg aaaacaccac 500  
 cttcaactcc agcagtgaag ctgagcagaa gacacagcgc ttctacctat 550  
 cttgcctaca ggtggagcgc attgaggagc tgggagocca gccactgaga 600  
 gacctattg agaagattgg tggttggaac attacggggc cctgggacca 650  
 ggacaacttt atggaggtgt tgaaggcagt agcagggacc tacagggcca 700  
 cccattctt caccgtctac atcagtgcgc actctaagag ttccaacagc 750  
 aatgttatcc aggtggacca gtctgggctc tttctgccct ctggggatta 800  
 ctacttaaac agaactgcc atgagaaagt gctcactgcc tatctggatt 850  
 acatggagga actggggatg ctgctgggtg ggcggccac ctccacgagg 900  
 gagcagatgc agcaggtgct ggagttggag atacagctgg ccaacatcac 950  
 agtgcgccag gaccagcggc gcgacgagga gaagatctac cacaagatga 1000  
 gcatttcgga gctgcaggct ctggcgccct ccatggactg gcttgagttc 1050  
 ctgtctttct tgctgtcacc attggagttg agtgactctg agcctgtggt 1100  
 ggtgtatggg atggattatt tgcagcaggt gtcagagctc atcaaccgca 1150  
 cggaaccaag catcctgaac aattacctga tctggaacct ggtgcaaaag 1200  
 acaacctcaa gcctggaccg acgctttgag tctgcacaag agaagctgct 1250  
 ggagaccctc tatggcacta agaagtccctg tgtgccgagg tggcagacct 1300  
 gcatctcaa cacggatgac gcccttggct ttgctttggg gtcactcttc 1350  
 gtgaaggcca cgtttgaccg gcaaagcaaa gaaattgcag aggggatgat 1400  
 cagcgaaatc cggaccgcat ttgaggaggc cctgggacag ctggtttggg 1450  
 tggatgagaa gacccgccag gcagccaagg agaaagcaga tgccatctat 1500

gatatgattg gtttcccaga ctttatcctg gagcccaaag agctggatga 1550  
tgtttatgac gggtaacgaaa tttctgaaga ttctttcttc caaaacatgt 1600  
tgaatttgta caactttctct gccaaaggtta tggctgacca gctccgcaag 1650  
cctcccagcc gagaccagtg gagcatgacc ccccagacag tgaatgccta 1700  
ctaccttcca actaagaatg agatcgtctt ccccgtggc atcctgcagg 1750  
cccccttcta tgcccgaac caccccaagg ccctgaactt cgggtggcatc 1800  
gggtgtggtca tgggccatga gttgaogcat gcctttgatg accaagggcg 1850  
cgagtatgac aaagaaggga acctgcggcc ctggtggcag aatgagtccc 1900  
tggcagcctt ccggaaccac acggcctgca tggaggaaca gtacaatcaa 1950  
taccagggtca atggggagag gctcaacggc cgccagacgc tgggggagaa 2000  
cattactgac aacggggggc tgaaggctgc ctacaatgct taaaagcat 2050  
ggctgagaaa gcatggggag gagcagcaac tgccagccgt ggggctcacc 2100  
aaccaccagc tcttcttctg gggatttgcc cagggtgtgt gctcgggtccg 2150  
cacaccagag agctctcacg aggggctggt gaccgacccc cacagccctg 2200  
cccgttccg cgtgctgggc actctctcca actcccgta cttcctgcgg 2250  
cacttcggct gccctgtcgg ctcccccatg aaccagggc agctgtgtga 2300  
gggtgtggtag acctggatca ggggagaaat ggccagctgt caccagacct 2350  
ggggcagctc tctgacaaa gctgtttgct cttgggttg gaggaagcaa 2400  
atgcaagctg ggctgggtct agtccctccc cccacaggt gacatgagta 2450  
cagaccctcc tcaatacca cattgtgct ctgctttggg ggtgccctg 2500  
cctccagcag agccccacc attcaactgtg acatctttcc gtgtcaccct 2550  
gcctggaaga ggtctgggtg gggaggccag ttcccatagg aaggagtctg 2600  
cc 2602

<210> 526

<211> 736

<212> PRT

<213> Homo sapiens

<400> 526

Met	Asn	Val	Ala	Leu	Gln	Glu	Leu	Gly	Ala	Gly	Ser	Asn	Val	Gly
1				5				10						15

Phe	Gln	Lys	Gly	Thr	Arg	Gln	Leu	Leu	Gly	Ser	Arg	Thr	Gln	Leu
			20						25					30

Glu	Leu	Val	Leu	Ala	Gly	Ala	Ser	Leu	Leu	Leu	Ala	Ala	Leu	Leu		35	40	45
Leu	Gly	Cys	Leu	Val	Ala	Leu	Gly	Val	Gln	Tyr	His	Arg	Asp	Pro		50	55	60
Ser	His	Ser	Thr	Cys	Leu	Thr	Glu	Ala	Cys	Ile	Arg	Val	Ala	Gly		65	70	75
Lys	Ile	Leu	Glu	Ser	Leu	Asp	Arg	Gly	Val	Ser	Pro	Cys	Glu	Asp		80	85	90
Phe	Tyr	Gln	Phe	Ser	Cys	Gly	Gly	Trp	Ile	Arg	Arg	Asn	Pro	Leu		95	100	105
Pro	Asp	Gly	Arg	Ser	Arg	Trp	Asn	Thr	Phe	Asn	Ser	Leu	Trp	Asp		110	115	120
Gln	Asn	Gln	Ala	Ile	Leu	Lys	His	Leu	Leu	Glu	Asn	Thr	Thr	Phe		125	130	135
Asn	Ser	Ser	Ser	Glu	Ala	Glu	Gln	Lys	Thr	Gln	Arg	Phe	Tyr	Leu		140	145	150
Ser	Cys	Leu	Gln	Val	Glu	Arg	Ile	Glu	Glu	Leu	Gly	Ala	Gln	Pro		155	160	165
Leu	Arg	Asp	Leu	Ile	Glu	Lys	Ile	Gly	Gly	Trp	Asn	Ile	Thr	Gly		170	175	180
Pro	Trp	Asp	Gln	Asp	Asn	Phe	Met	Glu	Val	Leu	Lys	Ala	Val	Ala		185	190	195
Gly	Thr	Tyr	Arg	Ala	Thr	Pro	Phe	Phe	Thr	Val	Tyr	Ile	Ser	Ala		200	205	210
Asp	Ser	Lys	Ser	Ser	Asn	Ser	Asn	Val	Ile	Gln	Val	Asp	Gln	Ser		215	220	225
Gly	Leu	Phe	Leu	Pro	Ser	Arg	Asp	Tyr	Tyr	Leu	Asn	Arg	Thr	Ala		230	235	240
Asn	Glu	Lys	Val	Leu	Thr	Ala	Tyr	Leu	Asp	Tyr	Met	Glu	Glu	Leu		245	250	255
Gly	Met	Leu	Leu	Gly	Gly	Arg	Pro	Thr	Ser	Thr	Arg	Glu	Gln	Met		260	265	270
Gln	Gln	Val	Leu	Glu	Leu	Glu	Ile	Gln	Leu	Ala	Asn	Ile	Thr	Val		275	280	285
Pro	Gln	Asp	Gln	Arg	Arg	Asp	Glu	Glu	Lys	Ile	Tyr	His	Lys	Met		290	295	300
Ser	Ile	Ser	Glu	Leu	Gln	Ala	Leu	Ala	Pro	Ser	Met	Asp	Trp	Leu		305	310	315
Glu	Phe	Leu	Ser	Phe	Leu	Leu	Ser	Pro	Leu	Glu	Leu	Ser	Asp	Ser				

	320		325		330
Glu Pro Val Val	Val Tyr Gly Met Asp	Tyr Leu Gln Gln Val	Ser		
	335		340		345
Glu Leu Ile Asn	Arg Thr Glu Pro Ser	Ile Leu Asn Asn Tyr	Leu		
	350		355		360
Ile Trp Asn Leu	Val Gln Lys Thr Thr	Ser Ser Leu Asp Arg	Arg		
	365		370		375
Phe Glu Ser Ala	Gln Glu Lys Leu Leu	Glu Thr Leu Tyr Gly	Thr		
	380		385		390
Lys Lys Ser Cys	Val Pro Arg Trp Gln	Thr Cys Ile Ser Asn	Thr		
	395		400		405
Asp Asp Ala Leu	Gly Phe Ala Leu Gly	Ser Leu Phe Val Lys	Ala		
	410		415		420
Thr Phe Asp Arg	Gln Ser Lys Glu Ile	Ala Glu Gly Met Ile	Ser		
	425		430		435
Glu Ile Arg Thr	Ala Phe Glu Glu Ala	Leu Gly Gln Leu Val	Trp		
	440		445		450
Met Asp Glu Lys	Thr Arg Gln Ala Ala	Lys Glu Lys Ala Asp	Ala		
	455		460		465
Ile Tyr Asp Met	Ile Gly Phe Pro Asp	Phe Ile Leu Glu Pro	Lys		
	470		475		480
Glu Leu Asp Asp	Val Tyr Asp Gly Tyr	Glu Ile Ser Glu Asp	Ser		
	485		490		495
Phe Phe Gln Asn	Met Leu Asn Leu Tyr	Asn Phe Ser Ala Lys	Val		
	500		505		510
Met Ala Asp Gln	Leu Arg Lys Pro Pro	Ser Arg Asp Gln Trp	Ser		
	515		520		525
Met Thr Pro Gln	Thr Val Asn Ala Tyr	Tyr Leu Pro Thr Lys	Asn		
	530		535		540
Glu Ile Val Phe	Pro Ala Gly Ile Leu	Gln Ala Pro Phe Tyr	Ala		
	545		550		555
Arg Asn His Pro	Lys Ala Leu Asn Phe	Gly Gly Ile Gly Val	Val		
	560		565		570
Met Gly His Glu	Leu Thr His Ala Phe	Asp Asp Gln Gly Arg	Glu		
	575		580		585
Tyr Asp Lys Glu	Gly Asn Leu Arg Pro	Trp Trp Gln Asn Glu	Ser		
	590		595		600
Leu Ala Ala Phe	Arg Asn His Thr Ala	Cys Met Glu Glu Gln	Tyr		
	605		610		615

Asn	Gln	Tyr	Gln	Val	Asn	Gly	Glu	Arg	Leu	Asn	Gly	Arg	Gln	Thr	
				620						625				630	
Leu	Gly	Glu	Asn	Ile	Thr	Asp	Asn	Gly	Gly	Leu	Lys	Ala	Ala	Tyr	
				635						640				645	
Asn	Ala	Tyr	Lys	Ala	Trp	Leu	Arg	Lys	His	Gly	Glu	Glu	Gln	Gln	
				650						655				660	
Leu	Pro	Ala	Val	Gly	Leu	Thr	Asn	His	Gln	Leu	Phe	Phe	Val	Gly	
				665						670				675	
Phe	Ala	Gln	Val	Trp	Cys	Ser	Val	Arg	Thr	Pro	Glu	Ser	Ser	His	
				680						685				690	
Glu	Gly	Leu	Val	Thr	Asp	Pro	His	Ser	Pro	Ala	Arg	Phe	Arg	Val	
				695						700				705	
Leu	Gly	Thr	Leu	Ser	Asn	Ser	Arg	Asp	Phe	Leu	Arg	His	Phe	Gly	
				710						715				720	
Cys	Pro	Val	Gly	Ser	Pro	Met	Asn	Pro	Gly	Gln	Leu	Cys	Glu	Val	
				725						730				735	

Trp

<210> 527  
 <211> 4308  
 <212> DNA  
 <213> Homo sapiens

<220>  
 <221> unsure  
 <222> 1478, 3978, 4057-4058, 4070  
 <223> unknown base

<400> 527  
 gcccgccct cgcgcctccg cactcccgc tccctccctc cgcccgtcc 50  
 cgcgccctcc tccctccctc ctcccagct gtcccggtcg cgtcatgccg 100  
 agcctcccgg ccccgccggc cccgctgctg ctctcgggc tgctgctgct 150  
 cggctcccgg ccggcccgcg gcgcgggccc agagccccc gtgctgcca 200  
 tccgttctga gaaggagccg ctgcccgttc ggggagcggc aggtaggtgg 250  
 gcgcccgggg gaggcgcggg cggggagtcg ggctcggggc gagtcagcgc 300  
 cagcccggag ggggcgcggg gcgcaggtgg ctcggcgcgg cgggcggccc 350  
 ggaggggtgg cgggggcaga agggcgcggt gcctgggacc cgggacccgc 400  
 gggcagcccc cggggcgcca caggcgcca gctgggcagc ggcctccagc 450  
 caagcccgtc cccgcaggct gcaccttcgg cgggaaggtc tatgccttgg 500

acgagacgtg gcacccggac ctaggggagc cattcggggt gatgcgctgc 550  
 gtgctgtgcg cctgcgaggc gcagtggggt cgccgtacca ggggccctgg 600  
 cagggtcagc tgcaagaaca tcaaaccaga gtgccaacc ccggcctgtg 650  
 ggcagccgcg ccagctgccg ggacactgct gccagacctg cccccaggac 700  
 ttcgtggcgc tgctgacagg gccgaggctc caggcgggtg cacgagcccg 750  
 agtctcgctg ctgcgctcta gcctccgctt ctctatctcc tacaggcggc 800  
 tggaccgccc taccaggatc cgcttctcag actccaatgg cagtgtcctg 850  
 tttgagcacc ctgcagcccc cacccaagat ggcctgggtc gtgggggtgtg 900  
 gcggggcagtg cctcggttgt ctctgcggct ccttagggca gaacagctgc 950  
 atgtggcact tgtgacactc actcaccctt caggggaggt ctgggggcct 1000  
 ctcacccggc accggggcct gtccccagag accttcagt ccatcctgac 1050  
 tctagaaggc ccccaccagc agggcgtagg gggcatcacc ctgctcactc 1100  
 tcagtgaac agaggactcc ttgcattttt tgctgctctt ccgaggcctt 1150  
 gcaggactaa ccaggttcc cttgaggctc cagattctac accaggggca 1200  
 gctactgga gaacttcagg ccaatgtctc agcccaggaa ccaggctttg 1250  
 ctgaggtgct gcccacctg acagtccagg agatggactg gctggtgctg 1300  
 ggggagctgc agatggccct ggagtgggca ggcaggccag ggctgcgcat 1350  
 cagtggacac attgctgcca ggaagagctg cgacgtcctg caaagtgtcc 1400  
 tttgtggggc taatgccctg atcccagtc aaacgggtgc tgccggctca 1450  
 gccagcctca ctctgctagg aaatggcncc ctgatcctcc aggtgcaatt 1500  
 ggtagggaca accagtgagg tggtaggcat gacactggaa accaagcctc 1550  
 agcggaggga tcagcccact gtctgtgcc acatggctgg cctatcctcc 1600  
 cctgccccca ggcogtgggt atctgccctg ggctgggggtg cccgaggggc 1650  
 tcatatgctg ctgcagaatg agctcttctt gaacgtgggc accaaggact 1700  
 tcccagacgg agagcttogg gggcaacgtg gctgccctgc cctactgtgg 1750  
 ggcatagcgc ccgccctgcc cgtgcccta gcaggagccc tgggtgctacc 1800  
 ccctgtgaag agccaagcag cagggcacgc ctggctttcc ttggataccc 1850  
 actgtcacct gcaactatgaa gtgctgctgg ctgggcttgg tggctcagaa 1900  
 caaggcactg tcaactgocca cctccttggg cctcctggaa cgccagggcc 1950

tcggcggctg ctgaagggat tctatggctc agaggcccag ggtgtggtga 2000  
 aggacctgga gccggaactg ctgcggcacc tggcaaaagg catggcttcc 2050  
 ctgatgatca ccaccaaggt agccccagag gggagctccg agggcagcct 2100  
 ctccctcccag gtgcacatag ccaaccaatg tgaggttggc ggactgcgcc 2150  
 tggaggcggc cggggccgag ggggtgcggg cgctgggggc tccgataca 2200  
 gcctctgctg cgccgcctgt ggtgcctggt ctcccggccc tagcgccgc 2250  
 caaacctggt ggtcctgggc ggccccgaga cccaacaca tgcttcttcg 2300  
 aggggcagca gcgccccac ggggctcgct gggcgcccaa ctacgaccg 2350  
 ctctgctcac tctgcacctg ccagagacga acggtgatct gtgaccgggt 2400  
 ggtgtgcca ccgccagct gccacaccc ggtgcaggct cccgaccagt 2450  
 gctgccctgt ttgccctggc tgctattttg atggtgaccg gagctggcgg 2500  
 gcagcgggta cgcggtggca ccccgttgtg ccccccttg gcttaattaa 2550  
 gtgtgctgtc tgcacctgca agcagggggg cactggagag gtgactgtg 2600  
 agaaggtgca gtgtccccg ctggcctgtg ccagcctgt gcgtgtcaac 2650  
 cccaccgact gctgcaaaac gtgtccaggt gaggcccacc ccagctggg 2700  
 ggaccccatg caggctgatg ggccccggg ctgccgtttt gctgggcagt 2750  
 ggttcccaga gagtcagagc tggcaccct cagtgcctcc gtttggagag 2800  
 atgagctgta tcacctgcag atgtggggta agtggggagc agaggcttgt 2850  
 gtgaggtggg tactgggagc ctggtctgga gtaggagac ctcccaggg 2900  
 aggtccctga agaagctgaa ggtcactgtg tcccagtgc tctgggggac 2950  
 actcagtgtc tgctctgtct tgtaccaggc aggggtgcct cactgtgagc 3000  
 gggatgactg ttcactgcca ctgtcctgtg gctcggggaa ggagagtcga 3050  
 tgctgttccc gctgcacggc ccaccggcgg cgtaagtgag ggagtccagg 3100  
 gtcagcagct gtgagtggag ggctcacctg cctgtgggac tctgatcag 3150  
 ggaaggagc actcactgtg tgcaggaaca gtgcagcctg cctcacaagt 3200  
 gccattccaa tccaccctca cagcaacctg gtggaattgt tatttatgac 3250  
 cttttcttta caaatgagat ttctgaagct cagagaaatt aagcaacgag 3300  
 atgaaggtca ccagctgtg tgcactgacc tgtttagaaa atactggcct 3350  
 ttctgggacc aaggcagga tgctttgccc tgccctctat gcctctctgt 3400

gcctctccac tccctctccc ctctccaac attccctccc ttctgtctcc 3450  
 agcagcccca gagaccagaa ctgatccaga gctggagaaa gaagccgaag 3500  
 gctcttaggg agcagccaga gggccaagtg accaagagga tggggcctga 3550  
 gctggggaag ggggtggcatc gaggaccttc ttgcattctc ctgtgggaag 3600  
 cccagtgcct ttgtctctct gtcctgcctc tactcccacc cccactacct 3650  
 ctgggaacca cagctccaca agggggagag gcagctgggc cagaccgagg 3700  
 tcacagccac tccaagtctt gccctgccac cctcggcctc tgtcctgga 3750  
 gccccacccc tttcttctctg tacataatgt cactggcttg ttgggatttt 3800  
 taatttatct tcaactcagca ccaagggccc cggacactcc actcctgctg 3850  
 cccctgagct gagcagagtc attattggag agttttgtat ttattaaaac 3900  
 atttcttttt cagtcttttg gcatgaggtt ggctctttgt ggccaggaac 3950  
 ctgagtgggg cctggtggag aaggggcnga gagtaggagg tgagagagag 4000  
 gagctctgac acttggggag ctgaaagaga cctggagagg cagaggatag 4050  
 cgtggcnntt ggctggcatn cctgggttcc gcagaggggc tggggatggt 4100  
 tcttgagatg gtctagagac tcaagaattt agggaagtag aagcaggatt 4150  
 ttgactcaag tttagtttcc cacatcgctg gcctgtttgc tgacttcag 4200  
 tttgaagtig ctccagagag agaatcaaag gtgtcaccag cccctctctc 4250  
 cctccttccc ttccttccc tttcttccc tcccctccc tcccctccc 4300  
 tcccctcc 4308

<210> 528  
 <211> 1285  
 <212> DNA  
 <213> Homo sapiens

<400> 528  
 ggccgagcgg ggggtgctgcg cggcgccgt gatggctggt gacggcggg 50  
 ccgggcaggg gaccggggcc gcggcccggg agcgggccag ctgccgggag 100  
 ccctgaatca ccgcctggcc cgactccacc atgaacgtcg cgctgcagga 150  
 gctgggagct ggcagcaacg tgggattcca gaaggggaca agacagctgt 200  
 taggctcacg cagcagctg gagctggtct tagcaggtgc ctctctactg 250  
 ctggctgcac tgcttctggg ctgccttggt gccctagggg tccagtacca 300  
 cagagacca tcccacagca cctgccttac agaggcctgc attcgagtgg 350



ctggaaaaat cctggagtcc ctggaccgag gggtgagccc ctgtgaggac 400  
 ttttaccagt tctcctgtgg gggctggatt cggaggaacc ccctgcccga 450  
 tgggcgttct cgctggaaca ccttcaacag cctctgggac caaaaccagg 500  
 ccatactgaa gcacctgctt gaaaacacca ccttcaactc cagcagttaa 550  
 gctgagcaga agacacagcg cttctaccta tcttgccctac aggtggagcg 600  
 cattgaggag ctgggagccc agccactgag agacctcatt gagaagattg 650  
 gtggttgga cttacgggg ccctgggacc aggacaactt tatggagggtg 700  
 ttgaaggcag tagcagggac ctacagggcc accccattct tcaccgtcta 750  
 catcagtgcc gactctaaga gttccaacag caatgttatc caggtggacc 800  
 agtctgggct ctttctgccc tctcgggatt actacttaaa cagaactgcc 850  
 aatgagaaag taaggaacat cttccgaacc cccatcccta ccctggctg 900  
 agctgggctg atccctgttg acttttcctt ttgccaaggg tcagagcagg 950  
 gaaggtgagc ctatcctgtc acctagttaa caaactgccc ctcccttctt 1000  
 tcttcttttc ttctccctc cctcccttct tctccctttt ccttccttcc 1050  
 ttctcttat tcttctagta ggtttcatag acacctactg tgtgccagg 1100  
 ccagtggggg aattcggaga tataagtttc cgagccattg ccacaggaag 1150  
 cgttcagtgt cgatgggttc atggacctag ataggctgat aacaaagctc 1200  
 acaagagggt cctgaggatt caggagagac ttatggagcc agcaaagtct 1250  
 tctgaagag attgcatttg agccaggctc tgtag 1285

<210> 529

<211> 1380

<212> DNA

<213> Homo sapiens

<400> 529

atgcctacta ccttccaact aagaatgaga tcgtcttccc cgctggcatc 50  
 ctgcaggccc cttctatgc ccgcaaccac cccaaggccc tgaacttcgg 100  
 tggcatcggg gtggtcatgg gccatgagtt gacgcatgcc tttgatgacc 150  
 aagggcgcca gtatgacaaa gaagggaacc tgcggccctg gtggcagaat 200  
 gagtccctgg cagccttccg gaaccacacg gcctgcatgg aggaacagta 250  
 caatcaatac cagggtcaatg gggagagggt caacggccgc cagacgctgg 300  
 gggagaacat tgctgacaac ggggggctga aggctgccta caatgcttac 350

aaagcatggc tgagaaagca tggggaggag cagcaactgc cagccgtggg 400  
 gctcaccaac caccagctct tcttcgtggg atttgccag gtgtggtgct 450  
 cggtcgcac accagagagc tctcacgagg ggctggtgac cgacccccac 500  
 agccctgccc gcttcgcgct gctgggcact ctctccaact cccgtgactt 550  
 cctgcggcac ttcggtgcc ctgtcggctc ccccatgaac ccagggcagc 600  
 tgtgtgaggt gtggtagacc tggatcaggg gagaaatggc cagctgtcac 650  
 cagacctggg gcagctctcc tgacaaagct gtttgctctt gggttgggag 700  
 gaagcaaatz caagctgggc tgggtctagt ccctcccccc cacaggtgac 750  
 atgagtacag accctcctca atcaccacat tgtgcctctg ctttgggggt 800  
 gcccctgcct ccagcagagc cccaccatt cactgtgaca tctttccgtg 850  
 tcaccctgcc tggagaggt ctgggtgggg aggccagttc ccataggaag 900  
 gagtctgcct cttctgtccc caggctcact cagcctggcg gccatggggc 950  
 ctgccgtgcc tgccccactg tgaccacag gcctgggtgg tgtacctcct 1000  
 ggacttctcc ccaggctcac tcagtgcga cttaggggtg gactcagctc 1050  
 tgtctggctc accctcacgg gotaccccc cctcaccctg tgctccttgt 1100  
 gccactgctc ccagtgtgc tgctgacctt cactgacagc tcctagtgga 1150  
 agcccaaggc cctctgaaag cctcctgctg cccactgttt ccctgggctg 1200  
 agaggggaag tgcatatgtg tagcgggtac tggttcctgt gtcttagggc 1250  
 acaagcotta gcaaatgatt gattctccct ggacaaagca ggaaagcaga 1300  
 tagagcaggg aaaaggaaga acagagttta tttttacaga aaagagggtg 1350  
 ggagggtgtg gtcttggccc ttataggacc 1380

<210> 530

<211> 39

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 530

gaagcagtgc agccagcagt agagaggcac ctgctaaga 39

<210> 531

<211> 24

<212> DNA

<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 531  
acgcagctgg agctggtctt agca 24

<210> 532  
<211> 24  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 532  
ggtactggac ccctagggcc acaa 24

<210> 533  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 533  
cctcccagcc gagaccagtg g 21

<210> 534  
<211> 21  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 534  
ggtcctataa gggccaagac c 21

<210> 535  
<211> 44  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 535  
gactagttct agatcgcgag cggccgccct tttttttttt tttt 44

<210> 536  
<211> 16  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 536  
 cggacgcgtg ggtcga 16  
  
 <210> 537  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 537  
 cggccgtgat ggctgggtgac g 21  
  
 <210> 538  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 538  
 ggcagactcc ttcctatggg 20  
  
 <210> 539  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 539  
 ggcacttcat ggtccttgaa a 21  
  
 <210> 540  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 540  
 cggatgtgtg tgaggccatg cc 22  
  
 <210> 541  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 541  
 gaaagtaacc acggaggtca agat 24

<210> 542  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 542  
 cctcctccga gactgaaagc t 21  
  
 <210> 543  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 543  
 tcgcgttgct ttttctcgcg tg 22  
  
 <210> 544  
 <211> 17  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 544  
 gcgtgcgtca gggtcca 17  
  
 <210> 545  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 545  
 cgttcgtgca gcgtgtgta 19  
  
 <210> 546  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 546  
 cttcctcacc acctgcgacg gg 22  
  
 <210> 547  
 <211> 23  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 547

ggtaggcggt cctatagatg gtt 23

<210> 548

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 548

agatgtggat gaatgcagtg cta 23

<210> 549

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 549

atcaacaccg cggcagtta ctgg 24

<210> 550

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 550

acagagtgtta ccgtctgcag aca 23

<210> 551

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 551

agcctcctgg tgcactcct 19

<210> 552

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 552

cgactccctg agcgagcaga tttcc 25

<210> 553

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 553

gctgggcagt cacgagtctt 20

<210> 554

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 554

aatcctccat ctcagatctt ccag 24

<210> 555

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 555

cctcagcggc aacagccggc c 21

<210> 556

<211> 15

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 556

tgggccaagg gctgc 15

<210> 557

<211> 22

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 557

tggtggataa ccaacaagat gg 22

<210> 558

<211> 34

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 558

gagtcctgcat ccacaccact cttaaagttc tcaa 34

<210> 559

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 559

caggtgctct tttcagtcac gttt 24

<210> 560

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 560

tggccattct caggacaaga g 21

<210> 561

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> synthetic oligonucleotide probe

<400> 561

cagtaatgcc atttgcctgc ctgcat 26

<210> 562

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 562

tgcctggaat cacatgaca 19

<210> 563



<211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> synthetic oligonucleotide probe  
  
 <400> 563  
 tgtggcacag acccaatcct 20  
  
 <210> 564  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 564  
 gaccctgaag gcctccggcc t 21  
  
 <210> 565  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 565  
 gagagagggga aggcagctat gtc 23  
  
 <210> 566  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 566  
 cagcccctct ctttcacctg t 21  
  
 <210> 567  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 567  
 ccatcctgtg cagctgacac acagc 25  
  
 <210> 568  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 568  
 gccaggctat gaggtcctt 20  
  
 <210> 569  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 569  
 ttcaagttcc tgaagccgat tat 23  
  
 <210> 570  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 570  
 ccaacttccc tccccagtcg cct 23  
  
 <210> 571  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 571  
 ttggggaagg tagaatttcc ttgtat 26  
  
 <210> 572  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 572  
 cccttctgcc tccaattct 20  
  
 <210> 573  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe

<400> 573  
 tctcctccgt ccccttcctc cact 24

<210> 574  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 574  
 tgagccactg ccttgcat 20

<210> 575  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 575  
 tctgcagacg cgatggataa 20

<210> 576  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 576  
 ccgaaaataa aacatgccc cttctg 26

<210> 577  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 577  
 cacgtggcct ttcacactga 20

<210> 578  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 578  
 acttgtagaca gcagtatgct gtctt 25

<210> 579  
 <211> 26  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 579  
 aagcttctgt tcaatcccag cgggcc 26  
  
 <210> 580  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 580  
 atgcacaggg tttttctggt aa 22  
  
 <210> 581  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 581  
 gcaggaaacc ttcgaatctg ag 22  
  
 <210> 582  
 <211> 29  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 582  
 acacctgagg cacctgagag aggaactct 29  
  
 <210> 583  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 583  
 gacagcccag tacacctgca a 21  
  
 <210> 584  
 <211> 21  
 <212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 584

gacggctgga tctgtgagaa a 21

<210> 585

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 585

cacaactgct gaccccgccc a 21

<210> 586

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 586

ccaggatagc acatgctgca 20

<210> 587

<211> 24

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 587

aaactccaac ctgtatcaga tgca 24

<210> 588

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 588

cccccaagcc cttagactct aagcc 25

<210> 589

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 589

gacccggcac cttgctaac 19

<210> 590

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 590

ggacggtcag tcaggatgac a 21

<210> 591

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 591

ttcggcatca tctcttcct ctccc 25

<210> 592

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 592

acaaaaaaaaa gggaacaaaaa tacga 25

<210> 593

<211> 28

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 593

ctttgaatag aagacttctg gacaattt 28

<210> 594

<211> 30

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 594

ttgcaactgg gaatatacca cgacatgaga 30

<210> 595

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 595

tagggtgcta atttgtgcta taacct 26

<210> 596

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 596

ggctctgagt ctctgcttga 20

<210> 597

<211> 25

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 597

tccaacaacc attttcctct ggtcc 25

<210> 598

<211> 23

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 598

aagcagtagc cattaacaag tca 23

<210> 599

<211> 20

<212> DNA

<213> Artificial Sequence

<220>

<223> Synthetic oligonucleotide probe

<400> 599

caagcgtcca ggtttattga 20

<210> 600

<211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 600  
 gactacaagg cgctcagcta 20  
  
 <210> 601  
 <211> 21  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 601  
 ccggctgggt ctcaactcctc c 21  
  
 <210> 602  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 602  
 cgttcgtgca gcgtgtgta 19  
  
 <210> 603  
 <211> 22  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 603  
 cttcctcacc acctgacgac gg 22  
  
 <210> 604  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 604  
 ggtaggcggt cctatagatg gtt 23  
  
 <210> 605  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence



<220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 605  
 agatgtggat gaatgcagtg cta 23  
  
 <210> 606  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 606  
 atcaacaccg ccggcagtta ctgg 24  
  
 <210> 607  
 <211> 23  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 607  
 acagagtgtta ccgtctgcag aca 23  
  
 <210> 608  
 <211> 19  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 608  
 agcctcctgg tgcactcct 19  
  
 <210> 609  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe  
  
 <400> 609  
 cgactccctg agcgagcaga tttcc 25  
  
 <210> 610  
 <211> 20  
 <212> DNA  
 <213> Artificial Sequence  
  
 <220>  
 <223> Synthetic oligonucleotide probe

<400> 610  
gctgggcagt cacgagtctt 20

<210> 611  
<211> 2840  
<212> DNA  
<213> Homo Sapien

<400> 611  
cccacgcgtc cgagcgcgcc gagaattaga cacactccgg acgcggccaa 50  
aagcaaccga gaggagggga ggcaaaaaca ccgaaaaaca aaaagagaga 100  
aacaacaccc aacaactggg gtggggggaa gaaagaaaga aaagaaaccc 150  
acccacccac caaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaatc 200  
ctgtggcgcg ccgcctggtt cccgggaaga ctgccagca ccagggggtg 250  
ggggagtgcg agctgaaagc tgctggagag tgagcagccc tagcagggat 300  
ggacatgatg ctgttggtgc aggggtgctt ttgctcgaac cagtggctgg 350  
cggcgggtgct cctcagcctg tgctgcctgc taccctcctg cctcccggct 400  
ggacagagtg tggacttccc ctgggcggcc gtggacaaca tgatggtcag 450  
aaaaggggac acggcgggtg ttaggtgtta tttggaagat ggagcttcaa 500  
aggggtgcctg gctgaaccgg tcaagtatta tttttgcggg aggtgataag 550  
tggtcagtgg atcctcagat ttcaatttca acattgaata aaagggacta 600  
cagcctccag atacagaatg tagatgtgac agatgatggc ccatacacgt 650  
gttctgttca gactcaacat acaccagaa caatgcaggt gcattctaact 700  
gtgcaagttc ctctaagat atatgacatc tcaaatgata tgaccgtcaa 750  
tgaaggaacc aacgtcactc ttacttgttt ggccactggg aaaccagagc 800  
cttccatttc ttggcgacac atctcccat cagcaaaacc atttgaaaat 850  
ggacaatatt tggacattta tggaattaca agggaccagg ctggggaata 900  
tgaatgcagt gcggaatatg ctgtgtcatt ccagatgtg aggaaagtaa 950  
aagttgttgt caactttgct cctactattc aggaaattaa atctggcacc 1000  
gtgacccccg gacgcagtgg cctgataaga tgtgaagggtg caggtgtgcc 1050  
gcctccagcc tttgaatggt acaaaggaga gaagaagctc ttcaatggcc 1100  
aacaaggaat tattattcaa aattttagca caagatccat tctcactgtt 1150  
accaacgtga cacaggagca cttoggcaat tatacctgtg tggctgcaa 1200  
caagctaggc acaaccaatg cgagcctgcc tcttaaccct ccaagtacag 1250

cccagtatgg aattaccggg agcgtgatg ttcttttctc ctgctggtac 1300  
 cttgtgttga cactgtcctc tttcaccagc atattctacc tgaagaatgc 1350  
 cattctacaa taaattcaaa gaccataaa aggcttttaa ggattctctg 1400  
 aaagtgtga tggctggatc caatctggta cagtttgta aaagcagcgt 1450  
 gggatataat cagcagtgtc tacatgggga tgatgcctt ctgtagaatt 1500  
 gctcattatg taaatacttt aattctactc ttttttgatt agctacatta 1550  
 ccttgtgaag cagtacacat tgtccttttt ttaagacgtg aaagctctga 1600  
 aattactttt agaggatatt aattgtgatt tcatgtttgt aatctacaac 1650  
 ttttcaaaag cattcagtca tggctgcta ggttgcaggc tgtagtttac 1700  
 aaaaacgaat attgcagtga atatgtgatt ctttaaggct gcaatacaag 1750  
 cattcagttc cctgtttcaa taagagtcaa tccacattta caaagatgca 1800  
 tttttttctt ttttgataaa aaagcaaata atattgcctt cagattatth 1850  
 cttcaaaata taacacatat ctagatthtt ctgcttgcat gatattcagg 1900  
 tttcaggaat gagccttgta atataactgg ctgtgcagct ctgcttctct 1950  
 ttctgtgaag ttcagcatgg gtgtgccttc atacaataat atthttctct 2000  
 ttgtctcaa ctaataataa atgttttgct aaatcttaca atthgaaagt 2050  
 aaaaataaac cagagtgatc aagttaaacc atacactatc tctaagtaac 2100  
 gaaggagcta ttggactgta aaaatctctt cctgcactga caatgggggt 2150  
 tgagaattht gccccacact aactcagttc ttgtgatgag agacaattht 2200  
 ataacagtat agtaaatata ccatatgatt tctthtagttg tagctaaatg 2250  
 ttagatccac cgtgggaaat cattccctth aaaatgacag cacagtccac 2300  
 tcaaaggatt gcctagcaat acagcatctt ttcctthcac tagtccaagc 2350  
 caaaaattht aagatgattt gtcagaaagg gcacaaagtc ctatcaccta 2400  
 atattacaag agttggtaag cgctcatcat taatthtatt ttgtggcagg 2450  
 tattatgaca gtcgacctgg agggatatga tatggatatg gacgttccag 2500  
 agactataat ggcagaaacc aggggtggta tgaccgtac tcaggaggaa 2550  
 attacagaga caattatgac aactgaaatg agacatgcac ataatataga 2600  
 tacacaagga ataatthctg atccaggatc gtcctthcaa atggctgtat 2650  
 ttataaagg ttttgagct gcaactgaagc atctthttht atagtatatc 2700

aaccttttgt ttttaaattg acctgccaag gtagctgaag acctttttaga 2750  
 cagttccatc ttttttttta aattttttct gcctatttaa agacaaatta 2800  
 tgggacgttt gtcaaaaaaa aaaaaaaaaa aaaaaaaaaa 2840

<210> 612  
 <211> 352  
 <212> PRT  
 <213> Homo Sapien

<400> 612

Met	Met	Leu	Leu	Val	Gln	Gly	Ala	Cys	Cys	Ser	Asn	Gln	Trp	Leu	1	5	10	15
Ala	Ala	Val	Leu	Leu	Ser	Leu	Cys	Cys	Leu	Leu	Pro	Ser	Cys	Leu	20	25	30	
Pro	Ala	Gly	Gln	Ser	Val	Asp	Phe	Pro	Trp	Ala	Ala	Val	Asp	Asn	35	40	45	
Met	Met	Val	Arg	Lys	Gly	Asp	Thr	Ala	Val	Leu	Arg	Cys	Tyr	Leu	50	55	60	
Glu	Asp	Gly	Ala	Ser	Lys	Gly	Ala	Trp	Leu	Asn	Arg	Ser	Ser	Ile	65	70	75	
Ile	Phe	Ala	Gly	Gly	Asp	Lys	Trp	Ser	Val	Asp	Pro	Arg	Val	Ser	80	85	90	
Ile	Ser	Thr	Leu	Asn	Lys	Arg	Asp	Tyr	Ser	Leu	Gln	Ile	Gln	Asn	95	100	105	
Val	Asp	Val	Thr	Asp	Asp	Gly	Pro	Tyr	Thr	Cys	Ser	Val	Gln	Thr	110	115	120	
Gln	His	Thr	Pro	Arg	Thr	Met	Gln	Val	His	Leu	Thr	Val	Gln	Val	125	130	135	
Pro	Pro	Lys	Ile	Tyr	Asp	Ile	Ser	Asn	Asp	Met	Thr	Val	Asn	Glu	140	145	150	
Gly	Thr	Asn	Val	Thr	Leu	Thr	Cys	Leu	Ala	Thr	Gly	Lys	Pro	Glu	155	160	165	
Pro	Ser	Ile	Ser	Trp	Arg	His	Ile	Ser	Pro	Ser	Ala	Lys	Pro	Phe	170	175	180	
Glu	Asn	Gly	Gln	Tyr	Leu	Asp	Ile	Tyr	Gly	Ile	Thr	Arg	Asp	Gln	185	190	195	
Ala	Gly	Glu	Tyr	Glu	Cys	Ser	Ala	Glu	Asn	Ala	Val	Ser	Phe	Pro	200	205	210	
Asp	Val	Arg	Lys	Val	Lys	Val	Val	Val	Asn	Phe	Ala	Pro	Thr	Ile	215	220	225	
Gln	Glu	Ile	Lys	Ser	Gly	Thr	Val	Thr	Pro	Gly	Arg	Ser	Gly	Leu				

230	235	240
Ile Arg Cys Glu Gly Ala Gly Val Pro	Pro Pro Ala Phe Glu Trp	
245	250	255
Tyr Lys Gly Glu Lys Lys Leu Phe Asn	Gly Gln Gln Gly Ile Ile	
260	265	270
Ile Gln Asn Phe Ser Thr Arg Ser Ile	Leu Thr Val Thr Asn Val	
275	280	285
Thr Gln Glu His Phe Gly Asn Tyr Thr	Cys Val Ala Ala Asn Lys	
290	295	300
Leu Gly Thr Thr Asn Ala Ser Leu Pro	Leu Asn Pro Pro Ser Thr	
305	310	315
Ala Gln Tyr Gly Ile Thr Gly Ser Ala	Asp Val Leu Phe Ser Cys	
320	325	330
Trp Tyr Leu Val Leu Thr Leu Ser Ser	Phe Thr Ser Ile Phe Tyr	
335	340	345
Leu Lys Asn Ala Ile Leu Gln		
350		

<210> 613  
 <211> 1797  
 <212> DNA  
 <213> Homo Sapien

<400> 613  
 agtgggttcga tgggaaggat ctttctccaa gtggttcctc ttgaggggag 50  
 catttctgct ggctccagga ctttggccat ctataaagct tggcaatgag 100  
 aaataagaaa atttctcaagg aggacgagct cttgagtgag acccaacaag 150  
 ctgcttttca ccaaattgca atggagcctt tcgaaatcaa tgttccaaag 200  
 cccaagagga gaaatgggggt gaacttctcc ctagctgtgg tggatcatcta 250  
 cctgatcctg ctcaaccgtg gcgctgggct gctggtgggc caagttctga 300  
 atctgcaggc gcggctccgg gtcctggaga tgtatttcct caatgacact 350  
 ctggcggtg aggcagccc gtccttctcc ttgctgcagt cagcacaccc 400  
 tggagaacac ctggctcagg gtgcatcgag gctgcaagtc ctgcaggccc 450  
 aactcacctg ggtccgcgtc agccatgagc acttgctgca gcgggtagac 500  
 aacttcactc agaaccagg gatgttcaga atcaaagggtg aacaaggcgc 550  
 cccaggtctt caaggtcaca agggggccat gggcatgcct ggtgccctg 600  
 gcccgccggg accacctgct gagaaggag ccaagggggc tatgggacga 650

gatggagcaa caggcccctc gggaccccaa ggcccaccgg gagtcaaggg 700  
agagggcgggc ctccaaggac cccaggggtgc tccaggggaag caaggagcca 750  
ctggcacccc aggaccccaa ggagagaagg gcagcaaagg cgatgggggt 800  
ctcattggcc caaaagggga aactggaact aaggagaga aaggagacct 850  
gggtctccca ggaagcaaag gggacagggg catgaaagga gatgcagggg 900  
tcattggggc tcctggagcc caggggagta aaggtgactt cgggaggcca 950  
ggcccaccag gtttggctgg ttttcctgga gctaaaggag atcaaggaca 1000  
acctggactg caggggtgttc cgggccctcc tgggtgcagtg ggacaccag 1050  
gtgccaaagg tgagcctggc agtgctggct cccctgggag agcaggactt 1100  
ccaggagacc cggggagtcc aggagccaca ggcctgaaag gaagcaaagg 1150  
ggacacagga cttcaaggac agcaaggaag aaaaggagaa tcaggagttc 1200  
caggccctgc aggtgtgaag ggagaacagg ggagcccagg gctggcaggt 1250  
cccaagggag cccctggaca agctggccag aaggagagacc agggagtga 1300  
aggatcttct ggggagcaag gagtaaaggg agaaaaagg gaaagagggtg 1350  
aaaactcagt gtccgtcagg attgtcggca gtagtaaccg aggccgggct 1400  
gaagtctact acagtgggtac ctgggggaca atttgcgatg acgagtggca 1450  
aaattctgat gccattgtct tctgccgat gctgggttac tccaaaggaa 1500  
gggccctgta caaagtggga gctggcactg ggcagatctg gctggataat 1550  
gttcagtgtc ggggacagga gaggacctg tggagctgca ccaagaatag 1600  
ctggggccat catgactgca gccacgagga ggacgcaggc gtggagtgca 1650  
gcgtctgacc cggaaccct ttcacttctc tgctcccag gtgtcctcgg 1700  
gctcatatgt gggaaggcag aggatctctg aggagttccc tggggacaac 1750  
tgagcagcct ctggagaggg gccattaata aagctcaaca tcattga 1797

<210> 614

<211> 520

<212> PRT

<213> Homo Sapien

<400> 614

Met	Arg	Asn	Lys	Lys	Ile	Leu	Lys	Glu	Asp	Glu	Leu	Leu	Ser	Glu
1				5				10						15
Thr	Gln	Gln	Ala	Ala	Phe	His	Gln	Ile	Ala	Met	Glu	Pro	Phe	Glu
			20					25						30

Ile	Asn	Val	Pro	Lys	Pro	Lys	Arg	Arg	Asn	Gly	Val	Asn	Phe	Ser	35	40	45
Leu	Ala	Val	Val	Val	Ile	Tyr	Leu	Ile	Leu	Leu	Thr	Ala	Gly	Ala	50	55	60
Gly	Leu	Leu	Val	Val	Gln	Val	Leu	Asn	Leu	Gln	Ala	Arg	Leu	Arg	65	70	75
Val	Leu	Glu	Met	Tyr	Phe	Leu	Asn	Asp	Thr	Leu	Ala	Ala	Glu	Asp	80	85	90
Ser	Pro	Ser	Phe	Ser	Leu	Leu	Gln	Ser	Ala	His	Pro	Gly	Glu	His	95	100	105
Leu	Ala	Gln	Gly	Ala	Ser	Arg	Leu	Gln	Val	Leu	Gln	Ala	Gln	Leu	110	115	120
Thr	Trp	Val	Arg	Val	Ser	His	Glu	His	Leu	Leu	Gln	Arg	Val	Asp	125	130	135
Asn	Phe	Thr	Gln	Asn	Pro	Gly	Met	Phe	Arg	Ile	Lys	Gly	Glu	Gln	140	145	150
Gly	Ala	Pro	Gly	Leu	Gln	Gly	His	Lys	Gly	Ala	Met	Gly	Met	Pro	155	160	165
Gly	Ala	Pro	Gly	Pro	Pro	Gly	Pro	Pro	Ala	Glu	Lys	Gly	Ala	Lys	170	175	180
Gly	Ala	Met	Gly	Arg	Asp	Gly	Ala	Thr	Gly	Pro	Ser	Gly	Pro	Gln	185	190	195
Gly	Pro	Pro	Gly	Val	Lys	Gly	Glu	Ala	Gly	Leu	Gln	Gly	Pro	Gln	200	205	210
Gly	Ala	Pro	Gly	Lys	Gln	Gly	Ala	Thr	Gly	Thr	Pro	Gly	Pro	Gln	215	220	225
Gly	Glu	Lys	Gly	Ser	Lys	Gly	Asp	Gly	Gly	Leu	Ile	Gly	Pro	Lys	230	235	240
Gly	Glu	Thr	Gly	Thr	Lys	Gly	Glu	Lys	Gly	Asp	Leu	Gly	Leu	Pro	245	250	255
Gly	Ser	Lys	Gly	Asp	Arg	Gly	Met	Lys	Gly	Asp	Ala	Gly	Val	Met	260	265	270
Gly	Pro	Pro	Gly	Ala	Gln	Gly	Ser	Lys	Gly	Asp	Phe	Gly	Arg	Pro	275	280	285
Gly	Pro	Pro	Gly	Leu	Ala	Gly	Phe	Pro	Gly	Ala	Lys	Gly	Asp	Gln	290	295	300
Gly	Gln	Pro	Gly	Leu	Gln	Gly	Val	Pro	Gly	Pro	Pro	Gly	Ala	Val	305	310	315
Gly	His	Pro	Gly	Ala	Lys	Gly	Glu	Pro	Gly	Ser	Ala	Gly	Ser	Pro			

320	325	330
Gly Arg Ala Gly Leu Pro Gly Ser Pro	Gly Ser Pro Gly Ala Thr	
335	340	345
Gly Leu Lys Gly Ser Lys Gly Asp Thr	Gly Leu Gln Gly Gln Gln	
350	355	360
Gly Arg Lys Gly Glu Ser Gly Val Pro	Gly Pro Ala Gly Val Lys	
365	370	375
Gly Glu Gln Gly Ser Pro Gly Leu Ala	Gly Pro Lys Gly Ala Pro	
380	385	390
Gly Gln Ala Gly Gln Lys Gly Asp Gln	Gly Val Lys Gly Ser Ser	
395	400	405
Gly Glu Gln Gly Val Lys Gly Glu Lys	Gly Glu Arg Gly Glu Asn	
410	415	420
Ser Val Ser Val Arg Ile Val Gly Ser	Ser Asn Arg Gly Arg Ala	
425	430	435
Glu Val Tyr Tyr Ser Gly Thr Trp Gly	Thr Ile Cys Asp Asp Glu	
440	445	450
Trp Gln Asn Ser Asp Ala Ile Val Phe	Cys Arg Met Leu Gly Tyr	
455	460	465
Ser Lys Gly Arg Ala Leu Tyr Lys Val	Gly Ala Gly Thr Gly Gln	
470	475	480
Ile Trp Leu Asp Asn Val Gln Cys Arg	Gly Thr Glu Ser Thr Leu	
485	490	495
Trp Ser Cys Thr Lys Asn Ser Trp Gly	His His Asp Cys Ser His	
500	505	510
Glu Glu Asp Ala Gly Val Glu Cys Ser	Val	
515	520	

<210> 615  
 <211> 647  
 <212> DNA  
 <213> Homo Sapien

<400> 615  
 cccacgcgtc cgaaggcaga caaaggttca tttgttaaaga agctccttcc 50  
 agcacctcct ctctttctoct tttgccc aaa ctcacccagt gagtgtgagc 100  
 atttaagaag catcctctgc caagacccaaa aggaaagaag aaaaagggcc 150  
 aaaagccaaa atgaaactga tggtacttgt tttcaccatt gggctaactt 200  
 tgctgctagg agttcaagcc atgcctgcaa atgcctcttc ttgctacaga 250  
 aagatactaa aagatcaciaa ctgtcacaac cttccggaag gagtagctga 300



cctgacacag attgatgtca atgtccagga tcatttctgg gatgggaagg 350  
 gatgtgagat gatctgttac tgcaacttca gcgaattgct ctgctgcca 400  
 aaagacgttt tctttggacc aaagatctct ttcgtgattc cttgcaacaa 450  
 tcaatgagaa tcttcatgta ttctggagaa caccattcct gatttccac 500  
 aaactgcact acatcagtat aactgcattt ctagtttcta tatagtgcaa 550  
 tagagcatag attctataaa ttcttacttg tctaagacaa gtaaattctgt 600  
 gttaaacaag tagtaataaa agttaattca atctaaaaaa aaaaaaa 647

<210> 616  
 <211> 98  
 <212> PRT  
 <213> Homo Sapien

<400> 616  
 Met Lys Leu Met Val Leu Val Phe Thr Ile Gly Leu Thr Leu Leu  
 1 5 10 15  
 Leu Gly Val Gln Ala Met Pro Ala Asn Arg Leu Ser Cys Tyr Arg  
 20 25 30  
 Lys Ile Leu Lys Asp His Asn Cys His Asn Leu Pro Glu Gly Val  
 35 40 45  
 Ala Asp Leu Thr Gln Ile Asp Val Asn Val Gln Asp His Phe Trp  
 50 55 60  
 Asp Gly Lys Gly Cys Glu Met Ile Cys Tyr Cys Asn Phe Ser Glu  
 65 70 75  
 Leu Leu Cys Cys Pro Lys Asp Val Phe Phe Gly Pro Lys Ile Ser  
 80 85 90  
 Phe Val Ile Pro Cys Asn Asn Gln  
 95

<210> 617  
 <211> 2558  
 <212> DNA  
 <213> Homo Sapien

<400> 617  
 cccacgcgtc cgcggacgcg tgggctggac cccaggtctg gagcgaattc 50  
 cagcctgcag ggctgataag cgaggcatta gtgagattga gagagacttt 100  
 accccgccgt ggtggttgga gggcgcgag tagagcagca gcacaggcgc 150  
 ggggtcccggg aggcggctc tgctcgcgcc gagatgtgga atctccttca 200  
 cgaaaccgac tcggctgtgg ccaccgcgc cgcgccgcgc tggctgtgcg 250  
 ctggggcgct ggtgctggcg ggtggcttct ttctcctcgg cttcctcttc 300

ggggtggttta taaaatcctc caatgaagct actaacatta ctccaaagca 350  
 taatatgaaa gcatttttgg atgaattgaa agctgagaac atcaagaagt 400  
 tcttacataa ttttacacag ataccacatt tagcaggaac agaacaaaac 450  
 tttcagcttg caaagcaaat tcaatcccag tggaaagaat ttggcctgga 500  
 ttctgttgag ctagctcatt atgatgtcct gttgtcctac ccaaataaga 550  
 ctcatcccaa ctacatctca ataattaatg aagatggaaa tgagattttc 600  
 aacacatcat tatttgaacc acctcctcca ggatatgaaa atgtttcgga 650  
 tattgtacca cctttcagtg ctttctctcc tcaaggaatg ccagagggcg 700  
 atctagtgtg tgtaaactat gcacgaactg aagacttctt taaattgga 750  
 cgggacatga aaatcaattg ctctgggaaa attgtaattg ccagatatgg 800  
 gaaagttttc agaggaaata aggttaaaaa tgcccagctg gcaggggcca 850  
 aaggagtcac tctctactcc gacctgtctg actactttgc tcctgggggtg 900  
 aagtcctatc cagacggttg gaatcttctt ggaggtgggtg tccagcgtgg 950  
 aaatatccta aatctgaatg gtgcaggaga ccctctcaca ccaggttacc 1000  
 cagcaaatga atatgcttat aggcgtggaa ttgcagaggc tgttggtctt 1050  
 ccaagtattc ctgttcatcc aattggatac tatgatgcac agaagctcct 1100  
 agaaaaaatg ggtggctcag caccaccaga tagcagctgg agaggaagtc 1150  
 tcaaagtgcc ctacaatgtt ggacctgggt ttactggaaa cttttctaca 1200  
 caaaaagtca agatgcacat ccactctacc aatgaagtga cgagaattta 1250  
 caatgtgata ggtactctca gaggagcagt ggaaccagac agatatgtca 1300  
 ttctgggagg tcaccgggac tcatgggtgt ttggtggtat tgacctcag 1350  
 agtggagcag ctgttggttca tgaaattgtg aggagctttg gaacactgaa 1400  
 aaaggaaggg tggagaccta gaagaacaat tttgtttgca agctgggatg 1450  
 cagaagaatt tgggtcttctt ggttctactg agtgggcaga ggagaattca 1500  
 agactccttc aagagcgtgg cgtggcttat attaattgtg actcatctat 1550  
 agaaggaaac tacactctga gagttgattg tacaccgctg atgtacagct 1600  
 tggtagacaa cctaacaaaa gagctgaaaa gccctgatga aggctttgaa 1650  
 ggcaaatctc tttatgaaag ttggactaaa aaaagtcctt cccagagtt 1700  
 cagtggcatg cccaggataa gcaaatggg atctggaaat gattttgagg 1750

tgtttcttcca acgacttggga attgcttcag gcagagcacg gtataactaaa 1800  
 aattggggaaa caaacaaatt cagcggctat ccaactgtatc acagtgtcta 1850  
 tgaacatat gagttggtgg aaaagtttta tgatccaatg tttaaatatc 1900  
 acctactgt ggcccagggt cgaggaggga tgggtgttga gctagccaat 1950  
 tccatagtgc tcccttttga ttgtcgagat tatgctgtag ttttaagaaa 2000  
 gtatgctgac aaaatctaca gtatttctat gaaacatcca caggaaatga 2050  
 agacatacag tgtatcattt gattcacttt tttctgcagt aaagaatttt 2100  
 acagaaattg cttccaagtt cagtgaagaga ctccaggact ttgacaaaag 2150  
 caaccaata gtattaagaa tgatgaatga tcaactcatg tttctggaaa 2200  
 gagcatttat tgatccatta gggttaccag acaggccttt ttataggcat 2250  
 gtcacttatg ctccaagcag ccacaacaag tatgcagggg agtcattccc 2300  
 aggaatttat gatgctctgt ttgatattga aagcaaagtg gacccttcca 2350  
 aggcctgggg agaagtgaag agacagattt atgttgcagc cttcacagt 2400  
 caggcagctg cagagacttt gagtgaagta gcctaagagg attttttaga 2450  
 gaatccgtat tgaatttgtg tggatatgtca ctcagaaaga atcgtaatgg 2500  
 gtatatgat aaattttaaa attggtatat ttgaaataaa gttgaatatt 2550  
 atatataa 2558

<210> 618  
 <211> 750  
 <212> PRT  
 <213> Homo Sapien

<400> 618  
 Met Trp Asn Leu Leu His Glu Thr Asp Ser Ala Val Ala Thr Ala  
 1 5 10 15  
 Arg Arg Pro Arg Trp Leu Cys Ala Gly Ala Leu Val Leu Ala Gly  
 20 25 30  
 Gly Phe Phe Leu Leu Gly Phe Leu Phe Gly Trp Phe Ile Lys Ser  
 35 40 45  
 Ser Asn Glu Ala Thr Asn Ile Thr Pro Lys His Asn Met Lys Ala  
 50 55 60  
 Phe Leu Asp Glu Leu Lys Ala Glu Asn Ile Lys Lys Phe Leu His  
 65 70 75  
 Asn Phe Thr Gln Ile Pro His Leu Ala Gly Thr Glu Gln Asn Phe  
 80 85 90

Gln	Leu	Ala	Lys	Gln	Ile	Gln	Ser	Gln	Trp	Lys	Glu	Phe	Gly	Leu	95	100	105
Asp	Ser	Val	Glu	Leu	Ala	His	Tyr	Asp	Val	Leu	Leu	Ser	Tyr	Pro	110	115	120
Asn	Lys	Thr	His	Pro	Asn	Tyr	Ile	Ser	Ile	Ile	Asn	Glu	Asp	Gly	125	130	135
Asn	Glu	Ile	Phe	Asn	Thr	Ser	Leu	Phe	Glu	Pro	Pro	Pro	Pro	Gly	140	145	150
Tyr	Glu	Asn	Val	Ser	Asp	Ile	Val	Pro	Pro	Phe	Ser	Ala	Phe	Ser	155	160	165
Pro	Gln	Gly	Met	Pro	Glu	Gly	Asp	Leu	Val	Tyr	Val	Asn	Tyr	Ala	170	175	180
Arg	Thr	Glu	Asp	Phe	Phe	Lys	Leu	Glu	Arg	Asp	Met	Lys	Ile	Asn	185	190	195
Cys	Ser	Gly	Lys	Ile	Val	Ile	Ala	Arg	Tyr	Gly	Lys	Val	Phe	Arg	200	205	210
Gly	Asn	Lys	Val	Lys	Asn	Ala	Gln	Leu	Ala	Gly	Ala	Lys	Gly	Val	215	220	225
Ile	Leu	Tyr	Ser	Asp	Pro	Ala	Asp	Tyr	Phe	Ala	Pro	Gly	Val	Lys	230	235	240
Ser	Tyr	Pro	Asp	Gly	Trp	Asn	Leu	Pro	Gly	Gly	Gly	Val	Gln	Arg	245	250	255
Gly	Asn	Ile	Leu	Asn	Leu	Asn	Gly	Ala	Gly	Asp	Pro	Leu	Thr	Pro	260	265	270
Gly	Tyr	Pro	Ala	Asn	Glu	Tyr	Ala	Tyr	Arg	Arg	Gly	Ile	Ala	Glu	275	280	285
Ala	Val	Gly	Leu	Pro	Ser	Ile	Pro	Val	His	Pro	Ile	Gly	Tyr	Tyr	290	295	300
Asp	Ala	Gln	Lys	Leu	Leu	Glu	Lys	Met	Gly	Gly	Ser	Ala	Pro	Pro	305	310	315
Asp	Ser	Ser	Trp	Arg	Gly	Ser	Leu	Lys	Val	Pro	Tyr	Asn	Val	Gly	320	325	330
Pro	Gly	Phe	Thr	Gly	Asn	Phe	Ser	Thr	Gln	Lys	Val	Lys	Met	His	335	340	345
Ile	His	Ser	Thr	Asn	Glu	Val	Thr	Arg	Ile	Tyr	Asn	Val	Ile	Gly	350	355	360
Thr	Leu	Arg	Gly	Ala	Val	Glu	Pro	Asp	Arg	Tyr	Val	Ile	Leu	Gly	365	370	375
Gly	His	Arg	Asp	Ser	Trp	Val	Phe	Gly	Gly	Ile	Asp	Pro	Gln	Ser			

380										385					390				
Gly	Ala	Ala	Val	Val	His	Glu	Ile	Val	Arg	Ser	Phe	Gly	Thr	Leu					
				395					400					405					
Lys	Lys	Glu	Gly	Trp	Arg	Pro	Arg	Arg	Thr	Ile	Leu	Phe	Ala	Ser					
				410					415					420					
Trp	Asp	Ala	Glu	Glu	Phe	Gly	Leu	Leu	Gly	Ser	Thr	Glu	Trp	Ala					
				425					430					435					
Glu	Glu	Asn	Ser	Arg	Leu	Leu	Gln	Glu	Arg	Gly	Val	Ala	Tyr	Ile					
				440					445					450					
Asn	Ala	Asp	Ser	Ser	Ile	Glu	Gly	Asn	Tyr	Thr	Leu	Arg	Val	Asp					
				455					460					465					
Cys	Thr	Pro	Leu	Met	Tyr	Ser	Leu	Val	His	Asn	Leu	Thr	Lys	Glu					
				470					475					480					
Leu	Lys	Ser	Pro	Asp	Glu	Gly	Phe	Glu	Gly	Lys	Ser	Leu	Tyr	Glu					
				485					490					495					
Ser	Trp	Thr	Lys	Lys	Ser	Pro	Ser	Pro	Glu	Phe	Ser	Gly	Met	Pro					
				500					505					510					
Arg	Ile	Ser	Lys	Leu	Gly	Ser	Gly	Asn	Asp	Phe	Glu	Val	Phe	Phe					
				515					520					525					
Gln	Arg	Leu	Gly	Ile	Ala	Ser	Gly	Arg	Ala	Arg	Tyr	Thr	Lys	Asn					
				530					535					540					
Trp	Glu	Thr	Asn	Lys	Phe	Ser	Gly	Tyr	Pro	Leu	Tyr	His	Ser	Val					
				545					550					555					
Tyr	Glu	Thr	Tyr	Glu	Leu	Val	Glu	Lys	Phe	Tyr	Asp	Pro	Met	Phe					
				560					565					570					
Lys	Tyr	His	Leu	Thr	Val	Ala	Gln	Val	Arg	Gly	Gly	Met	Val	Phe					
				575					580					585					
Glu	Leu	Ala	Asn	Ser	Ile	Val	Leu	Pro	Phe	Asp	Cys	Arg	Asp	Tyr					
				590					595					600					
Ala	Val	Val	Leu	Arg	Lys	Tyr	Ala	Asp	Lys	Ile	Tyr	Ser	Ile	Ser					
				605					610					615					
Met	Lys	His	Pro	Gln	Glu	Met	Lys	Thr	Tyr	Ser	Val	Ser	Phe	Asp					
				620					625					630					
Ser	Leu	Phe	Ser	Ala	Val	Lys	Asn	Phe	Thr	Glu	Ile	Ala	Ser	Lys					
				635					640					645					
Phe	Ser	Glu	Arg	Leu	Gln	Asp	Phe	Asp	Lys	Ser	Asn	Pro	Ile	Val					
				650					655					660					
Leu	Arg	Met	Met	Asn	Asp	Gln	Leu	Met	Phe	Leu	Glu	Arg	Ala	Phe					
				665					670					675					

Ile	Asp	Pro	Leu	Gly	Leu	Pro	Asp	Arg	Pro	Phe	Tyr	Arg	His	Val
				680					685					690
Ile	Tyr	Ala	Pro	Ser	Ser	His	Asn	Lys	Tyr	Ala	Gly	Glu	Ser	Phe
				695					700					705
Pro	Gly	Ile	Tyr	Asp	Ala	Leu	Phe	Asp	Ile	Glu	Ser	Lys	Val	Asp
				710					715					720
Pro	Ser	Lys	Ala	Trp	Gly	Glu	Val	Lys	Arg	Gln	Ile	Tyr	Val	Ala
				725					730					735
Ala	Phe	Thr	Val	Gln	Ala	Ala	Ala	Glu	Thr	Leu	Ser	Glu	Val	Ala
				740					745					750

<210> 619  
 <211> 24  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 619  
 agatgtgaag gtgcaggtgt gccg 24

<210> 620  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 620  
 gaacatcagc gctcccggta attcc 25

<210> 621  
 <211> 46  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 621  
 ccagcctttg aatggtacaa aggagagaag aagctcttca atggcc 46

<210> 622  
 <211> 25  
 <212> DNA  
 <213> Artificial Sequence

<220>  
 <223> Synthetic oligonucleotide probe

<400> 622  
 ccaaactcac ccagtgagtg tgagc 25

<210> 623  
<211> 25  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic oligonucleotide probe

<400> 623  
tgggaaatca ggaatggtgt tctcc 25

<210> 624  
<211> 50  
<212> DNA  
<213> Artificial Sequence

<220>  
<223> Synthetic Oligonucleotide probe

<400> 624  
cttgttttca ccattgggct aactttgctg ctaggagttc aagccatgcc 50